EHS Support

Universal Waste Site
Utica, New York

Prepared for:
ELG Utica Alloys, Inc.

January 2017

Consider it done

Final Interim Remedial Measure (IRM) Focused Feasibility Study (FFS) Work Plan

Prepared by:
EHS Support LLC

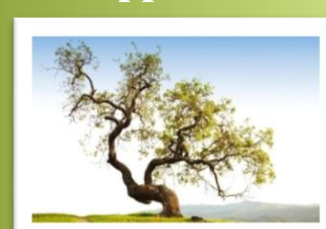


TABLE OF CONTENTS

TABLES

FIGURES

APPENDICES

ACRONYMS

ADEC	Alaska Department of Environmental Conservation
AOC	Administrative Order on Consent
ASTM	American Society for Testing and Materials
bgs	below ground surface
CAMP	Community Air Monitoring Plan
CFR	Code of Federal Regulations
cm/sec	centimeter per second
COC	constituent of concern
CY	cubic yard
DER-10	NYSDEC's Technical Guidance for Site Investigation and Remediation
DPT	direct-push technology
DRO	diesel range organics
DU	decision unit
E&E	Ecology and Environmental Engineering
EHS Support	EHS Support LLC
ELGUA	ELG Utica Alloys, Inc.
FFS	Focused Feasibility Study
ft	foot/feet
ft^2/day	square feet per day
GHGs	greenhouse gases
GRO	gasoline range organics
HASP	Health and Safety Plan
HEER	Hazard Evaluation and Emergency Response Department
IDW	Investigation Derived Waste
IRM	Interim Remedial Measure
ITRC	Interstate Technology Regulatory Council
LOSRI	Limited On-Site Remedial Investigation
mg/kg	milligram per kilogram
MSL	mean sea level
NAPL	non-aqueous phase liquid
NYCRR	New York Code, Rules, and Regulations
NYS	New York State
NYSDEC	New York State Department of Environmental Conservation
OHSWA	Oneida-Herkimer Solid Waste Authority
OU	operable unit
PCBs	polychlorinated biphenyls
PPE	personal protective equipment
PSA	Preliminary Site Assessment
QA/QC	quality assurance/quality control
QAPP	Quality Assurance Project Plan

RCRA	Resource Conservation and Recovery Act
RD/RA	Remedial Design/Remedial Action
RI/FS	Remedial Investigation/Feasibility Study
S&W	Stearns and Wheler
Site	Universal Waste Site
SVOC	semi-volatile organic compound
TAL	target analyte list
TCL	target compound list
TCLP	Toxicity Characteristic Leaching Procedure
TIC	tentatively identified compound
TSCA	Toxic Substances Control Act
UCU	United Contractors of Utica
USDA	United States Department of Agriculture
USDOT	United States Department of Transportation
USEPA	United States Environmental Protection Agency
UWBZ	upper water-bearing zone
VOC	volatile organic compound
Work Plan	IRM FFS Work Plan

1.0 INTRODUCTION

On behalf of ELG Utica Alloys, Inc. (ELGUA), EHS Support LLC (EHS Support) has prepared this Interim Remedial Measures (IRM) Focused Feasibility Study (FFS) Work Plan (Work Plan) for the Universal Waste site (the Site) located at the intersection of Wurz and Leland Avenues, in Utica, Oneida County, New York. The location of the Site is shown on **Figure 1-1**.

This Work Plan is required by and has been prepared in accordance with the New York State Department of Environmental Conservation (NYSDEC) Administrative Order on Consent (AOC) Index# AS-0850-15-03 dated October 11, 2015, and is being submitted to NYSDEC for review and approval in parallel with this submission to United States Environmental Protection Agency (USEPA) Region 2.

Polychlorinated biphenyls (PCBs) have been identified and are a constituent of concern (COC) for Site soil. Management of PCB remediation wastes containing greater than 1 milligram per kilogram (mg/kg) PCBs are governed by the Toxic Substances Control Act (TSCA) as outlined in 40 Code of Federal Regulations (CFR) §761.61. Therefore, this Work Plan is being submitted to USEPA for review and approval under the Self-Implementing Disposal option described in 40 CFR §761.61(a). This Work Plan addresses USEPA's September 2, 2016 comments on the IMR FFS Work Plan dated June 27, 2016, and also reflects the results of the October 14, 2016 meeting between ELGUA and USEPA.

1.1 Purpose

The purpose of this Work Plan is as follows:

1. Define the scope of work for a pilot study to evaluate potential alternatives for designing an IRM addressing the characterization, physical separation, and removal of some or all of the seventeen (17) debris piles and a soil berm ("Berm") located on the Site (**Figure 1-2**); and
2. Obtain all regulatory approvals necessary to implement the work set forth in this Work Plan. The debris piles and Berm are irregular in size and shape and consist of soil heterogeneously mixed with wood, scrap metal, plastic, tires, glass, concrete, stone and brick, all of highly variable sizes and shapes. Further information regarding the debris piles and Berm is provided in **Section 3.5**.

The heterogeneous nature of the piles and Berm create challenges to both investigation and characterization. The debris piles and Berm must be properly characterized to determine if the material can be reused, recycled or disposed of, as part of an IRM.

The Site is undergoing a Remedial Investigation/Feasibility Study (RI/FS) pursuant to AOC Index # AS-0850-15-03 and the debris piles and Berm (for purposes of a potential IRM) are being investigated as part of this study. The presence of the debris piles and Berm limits completion of the subsurface investigation required as part of the RI/FS. This pilot study will inform the Remedial Design/Remedial Action (RD/RA) efforts and the final remedy for the Site. ELGUA and the NYSDEC have agreed to completion of a pilot study to determine if an IRM is both feasible and appropriate, as it may be beneficial in completing the RI/FS and ultimately the RD/RA.

1.2 Pilot Study Objectives

The focus of this pilot study is two-fold: 1) determine if PCB remediation wastes are present within the piles and soil berm at the Site, and if so, the range of PCB concentrations; and (2) determine if a portion of the material in the debris piles and Berm can be reused or recycled as part of a full-scale IRM or final remedy.

1.2.1 In-Situ Characterization of PCBs

TSCA has a clear goal of ensuring dilution does not occur prior to sampling of potential wastes. Per 40 CFR §761.61, PCB remediation waste sampling should be based on in-situ characterization data (i.e., "as found"). "Any person cleaning up and disposing of PCBs managed under this section shall do so based on the concentration at which the PCBs are found." The concept of "as found" is further defined in the 2014 USEPA *PCB Question and Answer Manual* (June 2014).

> Question: Does "as found" mean in-situ, or can it refer to concentrations in stockpiles? Answer: "As found" refers to in-situ concentrations, or to stockpiles if the waste was already in place at the time of site investigation or characterization. The debris piles and Berm fall within the definition of "as found" due to the fact they were in place at the time of the site investigation activities.

The scope presented in this Work Plan follows TSCA by safeguarding against mixing or dilution of materials by delineating the debris piles and Berm into in-situ decision units (DUs) as defined in **Section 4.0** and implementing TSCA sampling procedures in accordance with 40 CFR §761 as further discussed in **Section 6.2**.

1.2.2 Recycle and/or Reuse vs. Landfill Disposal

This Work Plan includes the tenants of "green remediation" as defined by the NYSDEC and USEPA in their respective guidance documents *Green Remediation* (DER-31) dated August 11, 2010, and *Superfund Green Remediation Strategy* dated September 2010. The tenants of green remediation focus on a holistic remediation and planning approach, which minimizes the environmental footprint of cleanup actions and improves the overall sustainability of the Site cleanup by promoting the use of more sustainable practices and technologies. Such practices and technologies are, for example, less disruptive to the environment, generate less waste, increase reuse and recycling, and emit fewer pollutants, including greenhouse gases (GHGs), to the atmosphere. Based on the results of the characterization of the material in the debris piles and Berm, there may be the potential to recycle metals and plastics, and reuse concrete, brick, and soils as part of the final remedy for the Site.

1.3 Pilot Study Goals

The goals of the pilot study are as follows:

- Determine debris pile and Berm composition
  - Probable ratio of soil vs. other materials
  - Relative sizes and volumes of other separated materials
- Determine the range of PCB concentrations in soils and other separated materials
- Define possible end use of soils and other materials
  - Recycle
  - Reuse
  - Off-Site Disposal
- Assess efficacy and cost effectiveness of physical separation techniques to support understanding of proper end use of materials
  - Equipment and separation processes
  - Separation process rates and potential efficiencies
- Complete the characterization and handling efforts in accordance applicable local, state and federal regulations.

1.4 Applicable Regulations

This Work Plan has been prepared in accordance with TSCA 40 CFR §761.61 and NYSDEC's DER-10 (NYSDEC, 2010). The Resource Conservation and Recovery Act (RCRA) 6 New York Code, Rules, and Regulations (NYCRR) Part 370, et. Seq. will also be utilized for managing and disposing of hazardous waste, if generated during the pilot study.

As noted previously, this Work Plan is being submitted for USEPA review and approval under the Self-Implementing Disposal option described in 40 CFR §761.61(a). However, due to the scale and complexity of the Site, future phases of the remedial investigation and/or final remedy (potentially including a full-scale IRM) will be further evaluated with the USEPA to determine if Self-Implementing Disposal or a Risk-Based option as described in 40 CFR §761.61(c) is most appropriate.

2.0 SITE DESCRIPTION AND HISTORY

2.1 Site Description

The Site is located at the corner of Wurz Avenue and Leland Avenue in an industrialized area of the City of Utica, New York as shown on **Figure 1-1**. The Site is currently owned and operated by ELGUA and is listed on the New York State Inactive Hazardous Waste Disposal Site as Site No. 633009. Pursuant to the AOC Index# AS-0850-15-03 dated October 11, 2015, NYSDEC has identified the Site property owned by ELGUA as Operable Unit 1 (OU1), and certain off-site properties as Operable Unit 2 (OU2) and Operable Unit 3 (OU3) as shown on **Figure 2-1** and described in the following sections.

2.1.1 Operable Unit 1

OU1 consists of approximately 20 acres and is improved with a 14,000-square-foot building and two smaller sheds (**Figure 2-1**). OU1 is comprised of all or part of the following tax parcels: 319.05-1-32, 319.05-1-36, 319-9-1-73 and 319.05-1-37.

OU1 is bordered on the north, east, and southeast by OU3 as described below. OU1 is bordered to the north by south by the City of Utica Fire Department Training Facility (former Exxon bulk storage facility), a gravel road, and the Mohawk River including a river control structure on this section of the river. According to the *Preliminary Site Assessment* (Stearns & Wheler [S&W, 2000]), the former Exxon bulk storage facility was abandoned in 1972. The City of Utica Transit Authority, Leland and Wurz Avenues, and a parking lot are located to the west. Sewage Plant Road leading to the Oneida County sewage treatment plant and Oneida-Herkimer Solid Waste Authority (OHSWA) borders OU1 on the south, followed by a railroad-switching yard that runs east-west. The Utica Alloys Site borders OU1 on the south and west. The Utica Alloys site is also owned by ELGUA but is listed as a separate site on the New York State Inactive Hazardous Waste Disposal Site registry as Site No. 633047.

The pilot study activities proposed in this work plan will occur only in OU1.

2.1.2 Operable Unit 2

OU2 consists of two separate parcels of land located east of OU3 (**Figure 2-1**) and a portion of the main channel of the Mohawk River. The two parcels of land include a portion of tax parcel 319.005-1-35 located immediately east of OU3 and owned by United Contractors of Utica, NY (UCU) and a portion of tax parcel 319.10-1-1 located immediately east of the UCU property and owned by the City of Utica (known as Mohawk Flats). The portion of the Mohawk River included within OU2 extends from the Leland Avenue Bridge downstream approximately 1,000 yards past the eastern limit of the City of Utica property.

OU2 is bordered on the west by OU3, to the north by undeveloped wooded land on the north shore of the Mohawk River, to the south by Sewage Plant Road followed by a rail-switching yard, and to the east by the Mohawk River with undeveloped wooded land on its northern and southern banks.

2.1.3 Operable Unit 3

OU3 consists approximately 11 acres located north, east, and south of OU1, which is defined by a topographic elevation of greater than or equal to 402 feet mean sea level (ft MSL). OU3 consists of a portion of tax parcel 319.005-1-35 located east and south of OU1 and is owned by UCU, a portion of tax parcel 319.10-1-1 (known as Mohawk Flats) located east of OU1 owned by the City of Utica, and an access right-of-way located north of OU1 owned by the New York State (NYS) Canal Corporation.

OU3 is bordered on the west by OU1, to the north by the Mohawk River, to the south by Sewage Plant Road followed by a rail-switching yard, and to the east by undeveloped property owned by UCU and the City of Utica as well as the Mohawk River.

2.2 Site History and Operations

2.2.1 Operable Unit 1

The subject property was historically known as Universal Waste. Universal Waste Paper and Metal Company began operations at the Site in 1957. The company was founded to process scrap iron, aluminum, copper, and brass. In 1965, Utica Alloys, Inc. was incorporated to cater to regional melters of specialty alloys. In 1973, Universal Waste, Inc. replaced the former entity, Universal Waste Paper and Metal Company, to process copper, waste paper, and scrap iron. In the 1980s, Universal Waste, Inc. exited the waste paper business. In 2000, Universal Waste, Inc. ceased operations and the processing of ferrous and non-ferrous scrap; Utica Alloys continued to operate at the subject property and continued to use the name “Universal Waste” to refer to the Stainless Steel Division and the associated parcels of property. The *Preliminary Site Assessment* (PSA) (S&W, 2000) indicates that the Site was historically operated as a ferrous metal scrap recycling facility and that ferrous metal operations had ceased at the time of the PSA. Historical activities of Universal Waste included handling transformers and electrical components containing PCBs received from Universal Waste’s customers for disposal.

2.2.2 Operable Unit 2

Both the UCU and City of Utica parcels are heavily wooded and undeveloped. The UCU parcel drops in elevation approximately 15 feet at the boundary with the City of Utica property. The City of Utica property contains wetlands and marshes that are defined as part of the Mohawk River.

2.2.3 Operable Unit 3

As mentioned prior, both the UCU and City of Utica parcels are heavily wooded and undeveloped. However, according to the reported dated August 2015 by Ecology and Environment Engineering, P.C. (E&E) titled *Final Remedial Investigation Report, Universal Waste, Inc. Off-site Study Area Operable Unit 2* (E&E, 2015), a portion of the UCU parcel was previously used as a construction debris landfill. The NYS Canal Corporation property is located along the northern boundary of OU1 and consists of a narrow strip of land containing an access road on the southern bank of the Mohawk River.

3.0 SITE SETTING

This section presents a discussion of the topography and drainage, geology and hydrogeology of OU1. The debris piles and soil Berm located within OU1 will be the focus of the pilot study.

3.1 Topography and Drainage

3.1.1 Topography

The Site is located in the Mohawk River valley within the northern margin of the glaciated Appalachian Plateau province (**Figure 3-1**). The Mohawk River segment north of the Site was rerouted during the construction of the Erie Canal. In both the Mohawk River and the Erie Canal water flow is to the east-southeast.

Surface topography in the Site region ranges from approximately 377 ft MSL to greater than 1,600 ft MSL. The Mohawk River valley in this area is characterized by marine sedimentary rocks that were deposited during the Silurian and Devonian age. The region experienced periodic glaciation that is the source of much of the unconsolidated material deposited predominantly in the river valley (Casey and Reynolds, 1988; Olcott, 1995).

Historical maps indicate the Mohawk River flowed directly across the Site in 1900 (W.F. Cosulich, 1996). By 1945, the river was rerouted to its current location. Historical topographic maps show that as the Site was subsequently re-graded and developed, fill materials were likely put in place and remain under the Site today.

Surficial topography of OU1 is relatively flat with the lowest elevation (approximately 403 ft MSL) being near the center of OU1 along the railroad line and the Site gently slopes upwards towards the Site boundaries to the north, south, and west as shown on **Figure 3-2**.

3.1.2 Drainage

During a rain event, storm water is absorbed into the vegetated areas across the Site. Storm water not absorbed tends to pool in the low areas, which are near the center of the Site along the railroad line, until infiltration or evaporation occurs. Storm water runoff from precipitation that lands directly on the Berm is expected to infiltrate into the subsurface. Visual inspections, both historically and during this phase of investigation, indicate that the Berm is heavily vegetated and shows no signs of erosion pathways. In addition, the topographic survey prepared as part of the United Contractor site investigation performed by NYSDEC indicates that the elevation of the adjacent property is higher than those elevations along the Site's western Site property boundary, which would preclude storm water runoff onto adjacent properties.

3.2 Regional Geology

The geologic units underlying the Site formed approximately 540 to 470 million years ago (the Cambrian and Ordovician Periods) during marine deposition on a great limestone platform along the eastern edge of the North American continent. As highlands rose to the east during the Taconic orogeny, sediments shed from those highlands included sandstones and shales. The Mohawk Valley is a break between the Catskill Mountain system to the south and Adirondack Mountain system to the north.

During the Pleistocene Epoch, glacial ice sheets covered the area. Sediment transported beneath, within, and on the glacier was deposited by ice or meltwater to form glacial till. Retreating glaciers also deposited and washed away various sediments during this period. When the ice of the glacier moved gradually northward, its waters formed a lake or lakes covering the Mohawk Valley at different levels as the outlets were raised or lowered by water action.

The St. Lawrence Valley was blocked by an ice dam during the last glacial period and the Mohawk-Hudson River was the main river for drainage of the Lake Iroquois (now Lake Ontario). The lake drained to the southeast through a channel passing near present day Rome, New York (located about 10 miles west of the Site). The drainage channel then followed the valley of the Mohawk River to the Hudson River.

Glacial recession finally freed the St. Lawrence Valley of ice and the Great Lakes basin water level was lowered. When the water level fell below the Rome divide, the Great Lakes ceased to flow east through the Mohawk River and the former postglacial stream dwindled to somewhat near its present volume.

The streams from north and south which entered the arm of Lake Iroquois (between Rome and Little Falls), were heavily charged with debris from the newly drift-covered regions and the current not being strong enough to carry away the debris, the valley from Rome to Little Falls was built up (aggraded) to such an extent that, after the disappearance of Lake Iroquois, the drainage from Rome was able to continue eastward.

3.3 Site Geology

The Site geology characterization is based on numerous soil borings advanced at the Site in October 2013, February 2014, March 2014, December 2014, and May 2015. Boring depths ranged from 2 ft below ground surface (bgs) (LOSRI sample grid program) to 97 ft bgs (deep boring ELG-1). On-site borings advanced in the LOSRI soil sampling grid (e.g., A1 to I14) were generally 10 ft deep. Monitoring wells (UW-1 to UW-7) installed in March 2014 were advanced from 14 to 16 ft bgs. Soil borings advanced in December 2014 (MW-12) and May 2015 (MW-13, MW-14, MW-15, MW-16, UW-2B, UW-3B, UW-5B, and UW-6B) ranged in depth from 40 to 51 ft bgs. MW-12 was logged from 0 to 10 ft bgs and blind drilled to bedrock (51 ft bgs). The Site-specific geology presented below is based on the Site characterization data collected from 2014 through 2015.

Fill

Fill material is present at all boring locations and has a thickness ranging from 2 ft at C-15 to 16 ft at UW-5. Fill material is described to contain sand, silt, or clay with varying amounts of brick, concrete, gravel, metal, glass, ash, and other man-made materials. Fill material thickness appears to be thinner in borings located on the western portion of the Site (MW-13 and MW-14) and increases in thickness to the northeast and southeast toward the Mohawk River. Fill thickness is greatest at borings UW- 5 (16 ft), UW-5B (12.5 ft), and MW-15 (13 ft).

Alluvial Deposits

Alluvial deposits are observed below the fill material at depths ranging from 6 to 16 feet bgs. Alluvial deposits are observed as laterally extensive and/or discontinuous. Interbedded layers of variable sediment composition range in thickness from less than 0.5 ft to 13 ft.

The alluvial deposits consist generally of low to no strength, low-permeability, interbedded fine sand, silt, and clay with a dark brownish black color. The alluvial unit extends to about 28 to 30 ft bgs in most borings except at UW-4B and UW-5B where the alluvial unit extends to about 37 ft and 25 ft, respectively. Wood, plants, or roots are noted in several of the alluvial layers.

An extensive black fine-grained silt and clay (low permeability) layer occurs immediately beneath the fill material in all borings greater than 12 ft deep, except UW-4B where a black clayey fine sand overlies a brown and golden brown silt and clay layer. The black fine-grained layer ranges in thickness from 3 ft (UW-2B and UW-6B) to 12 ft (MW-15). This low permeable layer isolates groundwater above it from deeper groundwater. Below this fine-grained layer, deposits become more interbedded, variable in thickness, and contain more sand, which suggests a more-complex deposition of river sediments.

A pinkish-brown fine sand with varying amounts of fines is observed at the base of the alluvial and glacio-lacustrine sediments. This pinkish-brown fine sand is observed at borings MW-13, MW-15, UW-2B, and UW-3B at a depth of about 29 to 31 ft bgs. The unit is not continuous across the Site.

Glacio-Lacustrine Deposits

Underlying the upper alluvial deposits, several sediment sequences have been deposited by waters having alternating energy (e.g., flooding, river load, pro-glacial lake shoreline) and are interpreted as representing various glacio-lacustrine stages. The lack of organic matter and the presence of laminations suggest the glacio-lacustrine sequence was deposited during a different time or under slightly different depositional environments than the overlying unit. These mainly dark gray and gray coarse- and fine-grained interbedded sequences occurs between 20 and 45 ft bgs. Silt is a predominant sediment throughout the sequences.

Thinner coarse-grained layers and thicker fine-grained layers are observed in borings in the western portion of the Site (MW-13, MW-14, and MW-15). While the thickest layers of sand and gravel are observed in the borings (UW-4B and UW-5B) in the eastern portion of the Site and closer to the Mohawk River. Sediment layers described as predominantly sand or gravel (>50% sand or gravel) are observed to contain silt and clay in greater than trace (>5 to 10%) amounts (i.e., sand and gravel is not usually clean) with the exception of a sand and gravel unit at UW-4B (40 to 45 ft bgs).

In on-site borings, a competent silt/clay layer was observed at a depth from 37 to 40 ft at UW-2B and UW-6B; from 43 to 45 ft at MW-3B, and from 45 to 50 ft at MW-3, MW-14, MW-15, UW-4B, and UW-5B. The competent silt/clay layer was based on field observations of fine-grained sediment strength, tightness, thickness, or amount of clay. Most on-site borings did not extend beyond the glacio-lacustrine unit.

Three sequences of fine-grained materials are observed at deep boring ELG-1 from 40 to 57 ft bgs: tan silty clay occurs from 40 to 42 ft bgs; dark brownish black clayey silt from 42 to 47 ft bgs; and, tan silty clay/clayey silt from 47 to 57 ft bgs.

Outwash

Outwash sediments are observed at boring ELG-1 at two depths. The first (upper) unit occurred from 57 to 67 ft bgs. The sediment is described as a gray silty sand to clayey gravel and the unit appears to be a water-bearing unit. The second (lower) outwash unit occurred from 73.5 to 83.5 ft bgs. This unit is described as a wet, gray fine sand to clayey gravel and is also a water-bearing unit. The two units are separated by a layer of glacial till.

Glacial Till

This gray clay is observed at ELG-1 from 67 to 73.5 ft bgs. This till unit is described as hard with low moisture content. Particle analysis testing on soil sample ELG-1 (71.0-72.0) indicates about 42% of the particles passed through a 200 sieve (i.e., silt or clay) and 40% was sand, and 18% was gravel.

Bedrock

Shale bedrock observed at boring MW-12 at a depth of 51.2 ft bgs. At boring ELG-1, weathered shale (bedrock) occurs from 83.5 to 87 ft bgs with competent and massive shale from 87 to 97 ft bgs. The shale is interpreted as Ordovician Utica Shale. A sample of the shale (ELG-1 92.0) was tested for hydraulic conductivity to assess the transmissive properties of the rock. The hydraulic conductivity of the shale sample was 2.3×10^{-9} centimeters per second (cm/sec) indicating a very low ability for water movement through the material.

The regional stratigraphy, as described by Casey and Reynolds (1988), was generally encountered during the advancement of borings ELG-1 (84 ft) and MW-12 (51 ft). However, the thickness of the unconsolidated lithology at boring ELG-1 and MW-12 is less than what is observed in the deep borings installed at Utica Harbor (estimated thickness of approximately 150 ft to 250 ft) (Casey and Reynolds, 1988). Additionally, reported glacio-lacustrine deposits were described as mainly silt and clay (Casey and Reynolds, 1988) and the glacio-lacustrine deposits at the Site were observed to have more occurrences of sand and gravel.

3.4 Site Hydrogeology

Groundwater was encountered in the fill material (perched groundwater), fill material/alluvium deposits and below the alluvium deposits. Presented below is description of the groundwater encountered at the Site.

3.4.1 Perched Groundwater

Groundwater was encountered in the fill material between 1 and 4 ft in the borings installed at the Site in March 2014 and May 2015. The occurrence of perched groundwater in the upper portions of the fill material varied between March and May boring events, which suggests that the perched groundwater may be influenced by seasonality.

3.4.2 Groundwater in the Fill/Alluvium Deposits

Groundwater was encountered in the fill material and upper alluvial sediments from 4 to 10 ft bgs. Groundwater in this unit flows in a north, northeast and east direction from the Site towards the Mohawk River.

3.4.3 Deeper Groundwater

Groundwater occurs in the lower portion of the alluvium deposits, which is separated from the fill/upper alluvium sediments by an extensive black fine-grained silt and clay (low permeable sediments). This layer occurs immediately beneath the fill material. The black fine-grained silt and clay ranges in thickness from 3 ft (UW-2B and UW-6B) to 12 ft (MW-15). This low permeable sediment isolates groundwater above this layer from deeper groundwater. Groundwater is present in many of the lower alluvium and glacio-lacustrine deposits and is more plentiful in layers containing sand and gravel.

3.4.4 Groundwater Flow Direction

Based on the groundwater head levels and river surface water levels measured on October 12, 2015 (**Table 3-1**), a potentiometric surface map for the fill/alluvium water-bearing zone was developed as shown on **Figure 3-3**. Based on the data presented in **Figure 3-3**, the groundwater beneath OU1 in the fill/alluvium water-bearing zone flows in northeast and east directions towards the Mohawk River.

3.4.5 Aquifer Characteristics

Aquifer tests were conducted within the fill/alluvium water-bearing zone. The purpose of the aquifer tests was to evaluate the hydraulic properties in this portion of the formation (transmissivity, hydraulic conductivity, specific yield). This evaluation was achieved by conducting single-well constant rate pump tests on monitoring wells UW-3, UW-4, and UW-7 (2-inch ID wells, 13 to 14 ft deep with 10 ft of screen; **Figure 2-1**). The tests were performed on April 3 and 4, 2014. The test data for wells UW-3, UW-4, and UW-7 were analyzed with the AQTESOLV (Duffield, 2007) analytical software package to estimate transmissivity and specific yield.

In summary, the estimated hydraulic properties for the upper water-bearing zone (UWBZ) are as follows:

- Transmissivity ranges from 259 to 510 square ft per day (ft^2/day) (geometric mean of data set = 366 ft^2/day)
- Hydraulic conductivity ranges from 34 to 66 ft/day (geometric mean of data set = 48 ft/day)
- Specific yield ranges from 0.145 to 0.166 (geometric mean of data set = 0.155).

3.5 Nature and Extent of Berm and Debris Piles

3.5.1 Debris Pile/Berm Descriptions

As shown on **Figure 1-2**, there are 17 debris piles and a large soil berm currently located on OU1. The debris piles and Berm are irregular in size and shape and consist of soil heterogeneously mixed with wood, scrap metal, plastic, glass, concrete, stone and brick, all of highly variable sizes and shapes. The following table provides an estimate of the volume of each pile based on Site topography and visual inspection.

Table 3-2 Debris Pile/Berm Descriptions

Pile ID	Area (square ft)	Height (ft)	Estimated Volume (cubic yards)
1	5,500	9	1,830
2	6,600	6	1,470
3	6,000	6	1,330
4	7,100	6	1,600
5	500	6	100
6	1,600	4	240
7	29,000	4	4,300
8	3,400	10	1,260
9	1,000	6	230
10	400	6	90
11	1,800	6	400
12	2,100	6	470
13	1,200	6	270
14	4,100	6	920
15	5,500	10	2,040
16	250	4	40
17	3,500	4	520
Berm			10,300
Total Estimated Volume			**27,410**

Due to heterogeneity of the debris piles and Berm, the actual volumes of soil versus other inert materials metals (both ferrous and non-ferrous), wood, concrete, brick, tires, plastics and other irregular materials is not currently known. Photos of the debris piles and Berm are provided in **Appendix A**. Historic Site operations resulted in surface releases of PCBs to Site soils (EHS Support, 2014). Site investigation activities have indicated that PCBs are the primary COC for the property. A majority of the PCB impact is contained within the top two ft of the ground surface, primarily in the central eastern portion of the Site (EHS Support, 2014).

PCBs have a strong affinity for soils. In soils, the PCBs, like other hydrophobic organic contaminants, are mainly adsorbed to mineral surfaces, organic matter, clay and active oxide surfaces (Wang et al., 2008) and/or exist as a separate non-aqueous phase liquid (NAPL) (Mackay and Cherry, 1989). The transport of PCB congeners from such contaminated materials is limited due to their low aqueous solubility, slow dissolution from NAPL phases, and slow desorption from surfaces (Gan and Berthouex, 1994; Oliver, 1985) (Badea, et al, 2014). Based on the fact the historic PCB releases were surficial in nature and given PCBs known affinity to adhere to soils. It is anticipated that the primary PCB containing component of the debris piles and Berm will be the soils within these units. Therefore, it is expected that if the soils can be separated from the other porous and non-porous material present in the debris piles/Berm that is likely that sampling results of the porous and non-porous material may allow this material to be reused or recycled as an alternative to landfill disposal.

Other COCs have been identified at the Site and within the debris piles and Berm; however, PCB concentrations are expected to be the determining factor for the final disposition (i.e., reuse, recycle, or offsite disposal as a hazardous waste) of the soils associated with the pilot study.

The exact construction dates, purpose, and content of the debris piles and soil Berm are unknown. Attempts to collect hand auger and direct-push technology (DPT) samples from these areas have met with limited success. Soils at the base and surface of these piles can be collected, however when intrusive hand auger and DPT techniques were attempted refusal was met between 1.5 ft and 4 ft below the surface. The inability to penetrate the piles is due to the presence of metals, wood, concrete, brick, tires, plastics and other irregular materials intermixed in the piles and Berm. The composition, size, and shape of the piles and Berm do not allow for use of heavy drilling equipment to safely collect samples.

The proper characterization of these piles is required under 6 New York Code, Rules, and Regulations (NYCRR) Part 375, RCRA, and TSCA 40 CFR §761.61. The results from the characterization sampling will determine if the materials can be reused, recycled, or will require proper disposal off-site. This data will be evaluated in the FFS to assess the feasibility of an IRM for the Site.

3.5.2 Limited Debris Pile/Berm Sampling

As part of the LOSRI performed at the Site under the direction of NYSDEC, initial screening samples were collected from the Berm and the 17 debris piles to understand if PCBs were a constituent of concern and if further characterization under TSCA was necessary. The samples collected historically were both grab and composite methodologies which were not collected for the purposes of characterizing the berm and piles for disposal nor were they collected in accordance with NYSDEC's DER-10 or 40 CFR §761.61. However, these samples provided an indication that PCBs may be present in some or all the Berm and piles and additional characterization pursuant to TSCA and NYSDEC guidance may be necessary and appropriate.

A total of 25 discrete grab samples (BM-1 through BM-25) were collected from soils within the Berm on the eastern portion of OU1 during October 2013 (**Figure 3-4**). The Berm samples were analyzed for total

PCBs (as Aroclors) utilizing USEPA Method 8082. A summary of the PCB concentrations (as Aroclors) in the 25 grab samples is provided as **Table 3-3**.

In addition to the discrete grab samples collected from the Berm during October 2013, one composite sample (comprised of multiple grab samples) was collected from each of eight (8) investigation areas in the Berm (**Figure 3-4**) in June 2015, pursuant to the Supplemental LOSRI Work Plan – Phase 2 (Revision 3) (EHS Support, 2015). Each composite sample was analyzed for the following:

- PCBs (as Aroclor) by USEPA Method 8082
- Full target compound list (TCL) volatile organic compounds (VOCs) by USEPA Method 8260C
- Full TCL semi-volatile organic compounds (SVOCs) by USEPA Method 8270D
- Tentatively-identified compounds (TICs) will also be analyzed for the 30 (10 VOCs and 20 SVOCs) highest concentrations
- Target analyte list (TAL) Metals by USEPA Method 6000-7000 Series
- Total Cyanide with extraction by USEPA Method 9012-9010A and analysis by American Society for Testing and Materials (ASTM) Method D4282-02 (micro diffusion)
- TCL Pesticides by USEPA Method 8081B
- TCL Herbicides by USEPA Method 8151A
- Toxicity Characteristic Leaching Procedure (TCLP) VOCs, SVOCs, Metals (including mercury)
- Total Petroleum Hydrocarbons (diesel range organics [DRO]/gasoline range organics [GRO])
- Corrosivity
- Ignitability
- Reactive Cyanide and Sulfide
- Total Organic Halogens.

The results of the Berm composite sampling are summarized in **Table 3-4**.

During June 2015, one composite sample (comprised of multiple discrete grab samples) was collected from each of the seventeen (17) debris piles and analyzed for the parameters identified above. The standard methodology for the composite sample collection and figures showing the approximate discrete grab sample locations are provided in **Appendix B**. The results of the debris pile composite sampling are summarized in **Table 3-5** and the PCB concentrations are summarized in **Table 3-6**.

Table 3-6 PCB Concentration in Debris Pile Composite Samples

Pile ID	Estimated Pile Volume (cubic yards)	Number of Discrete Samples included in Composite Sample	PCB Concentration (mg/kg)
1	1,830	15	15
2	1,470	20	14
3	1,330	18	7
4	1,600	20	53
5	100	10	40
6	240	12	42
7	4,300	22	75
8	1,260	20	12
9	230	12	38
10	90	10	28
11	400	13	49
12	470	15	22
13	270	15	11
14	920	18	7
15	2,040	25	104
16	40	10	4
17	520	15	1
Berm	10,300	Not Applicable	See Tables 3-3 and 3-4

Based on the TCLP, corrosivity, ignitability, and reactivity analyses, none of the samples collected from the debris piles or the Berm were considered characteristically hazardous. However, PCB concentrations exceeded 50 mg/kg in 3 of 17 debris pile samples, 22 of 25 Berm grab samples, and all 8 of the Berm composite samples.

3.5.3 Consideration of Screening Data for Pilot Study

As directed by USEPA during the October 14, 2016 meeting, even though the screening data were not intended for disposal characterization, the screening data must be considered when characterizing the DUs during the pilot study. To address this requirement, all historic screening samples will be mapped as accurately as possible to identify the origin of both discrete and composite sample collection locations. If a DU selected for this pilot study includes a historic sampling location (discussed in **Section 3.5.1** and **3.5.2)**, the PCB concentration from that screening sample will represent the 25-CY sub-pile where the discrete screening sample was located in lieu of collecting a sample from the excavator bucket as described in **Section 6.2**.

4.0 DECISION UNIT DESIGNATION AND DEBRIS PILE BERM SELECTION

4.1 Decision Unit Designation

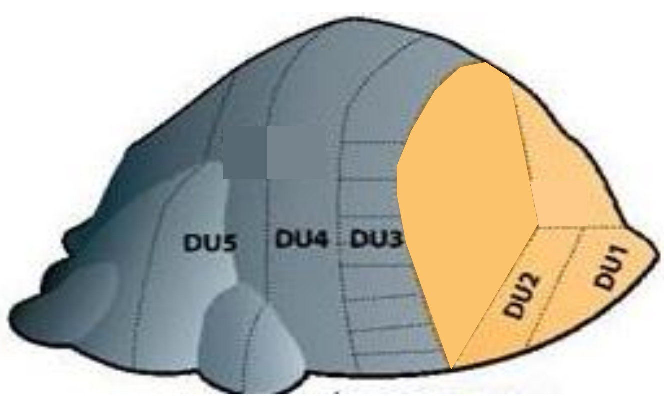
The initial screening samples indicate PCBs have been identified in soils in the debris piles and Berm at the Site. Per 40 CFR §761.61, PCB remediation waste must be tested in place to determine the "as-found" concentration of PCBs. Due to heterogeneity of the debris piles and Berm, sampling in place would not allow for accurate characterization due to obstructions and interference with sampling equipment to achieve penetration of the piles at depth. To overcome this obstacle and meet the requirements of 40 CFR §761.61, to achieve full and accurate characterization, the debris piles and Berm will be subdivided into DUs.

A DU is the smallest area for which a decision can be made (ITRC, 2012). USEPA has long recognized that it may be beneficial to subdivide a large population of waste or media into smaller units (or DUs) about which decisions can be made, rather than attempt to characterize the entire population (USEPA, 2002).

DUs may represent a single type of waste at the point of waste generation, a waste from a single batch operation, waste generated over a specified time, or a volume of waste or contaminated media (such as soil) subject to characterization, removal, and/or treatment. The concept of a DU is similar to an "exposure unit" (Neptune, et al., 1990; Blacker and Goodman, 1994a and 1994b; Myers, 1997), or "exposure area" (USEPA, 1992a and 1996a) in USEPA's Superfund program in which risk-based decisions consider the mass or area of the waste or media. A DU also is analogous to a "remediation unit" as described in USEPA's Data Quality Objective Process for Superfund (USEPA, 1993a).

For this Work Plan, a DU is defined by a contiguous volume of 200 cubic yards (CY) See **Figure 4-1** below for an illustration of how a debris pile may be separated into individual DUs. To address the concerns identified in 40 CFR §761.61 in regards to eliminating the potential for mixing or dilution to occur, each DU will be managed as a separate unit throughout the pilot study process. Each DU will be volumetrically defined in the field. The materials from each DU will be handled independently, tracked through both field and photo documentation. DU material handling will be completed in a manner that does not allow for contact with site soils or other DUs to safeguard against dilution. Further details are provided in **Section 5** of this Work Plan.

Figure 4-1 Decision Unit Illustration (HEER, 2011)



4.2 Debris Pile/Berm Selection

As discussed in **Section 3.5**, there are 17 debris piles and a soil Berm on the Site (**Figure 1-2**). For the pilot study to be effective, representative samples of the debris piles and Berm are required. The debris piles and Berm were methodically evaluated to identify those piles and portion of the Berm that would be most representative of the entire debris pile and Berm volume. The debris piles selected for the pilot study was determined based on one or more of the following rationale:

- Debris piles where the composition is at least 50% soil (based on visual examination)
- Visual examination; if a pile appeared dissimilar to others or in cases where multiple piles contain similar materials
- The PCB concentrations, based on initial discrete and composite screening samples (October 2013 and June 2015); biased to those piles with the highest PCB concentrations, and or
- Target those piles that would contain at a minimum of one DU (200 CY).

The following debris piles/Berm and volumes have been selected for the pilot study. The locations of the selected debris piles/Berm are shown on **Figure 1-2**:

- Pile 1 200 CY (1 DU; about 11% of the estimated total volume of the pile)
- Pile 4: 200 CY (1 DU; about 13% of the estimated total volume of the pile)
- Pile 7: 400 CY (2 DUs; about 10% of the estimated total volume of the pile)
- Pile 8: 200 CY (1 DU; about 16% of the estimated total volume of the pile)
- Pile 15: 200 CY (1 DU; about 10% of the estimated total volume of the pile)
- Berm: 800 CY (4 DUs; about 8% of the estimated total volume of the berm).

Alternative debris piles and DUs may be selected in the field based on visual inspection after NYSDEC review and approval.

5.0 SITE PREPARATION

5.1 Clearing and Grubbing

Several debris piles/Berm are overgrown with trees and vegetation and will require clearing and grubbing prior to implementing the pilot study. Clearing and grubbing will consist of the removal of only those trees with a trunk diameter of 4 inches or larger. Removal of trees will be accomplished by mechanically cutting the trunk no less than 2 inches above the surface of the debris piles/Berm, and the cut trees will be removed from the pile in a manner that prevents the disturbance of any debris pile/Berm material.

5.2 Equipment Decontamination and Decontamination Area

All equipment coming into contact with media potentially impacted with PCBs will be decontaminated between work at each DU and at the conclusion of the pilot study. Decontamination will be performed in accordance with the procedures defined in 40 CFR §761.79 or procedures defined in the alternate decontamination plan prepared in accordance with 40 CFR §761.79(h) and provided to USEPA for review and approval prior to initiating the pilot study. All wastewater and material generated during decontamination will be managed as described in **Section 8.0** of this work plan.

5.3 Dust Monitoring and Controls

The Site-specific Community Air Monitoring Plan (CAMP), previously prepared for the Site, will be implemented during all ground intrusive activities including, but not limited to, DU extraction, sorting and mechanical screening, and otherwise handling of sorted, segregated materials. If community air monitoring indicates the need for dust suppression or if dust is visually observed leaving the Site, the remediation contractor will apply a water spray across the exclusion zone and surrounding areas, and on haul areas as necessary to mitigate airborne dust formation and migration. The trommel equipment may be equipped with individual dust suppressant capabilities. Potable water will be obtained from either a public hydrant or the on-site water service, if available. Other dust suppression techniques that may be used to supplement the water spray include:

- Hauling materials in properly tarped containers or vehicles
- Restricting vehicle speeds onsite.

5.4 Erosion and Sedimentation Control

An Erosion and Sediment Control Plan will be developed in accordance with the NYSDEC July 2016 Standards and Specifications for Erosion and Sediment Control guidance to limit potential erosion/cross contamination during the IRM FFS efforts. The DUs removed during the pilot study and associated segregated materials will be temporarily stored on plastic sheeting or in containers and covered with plastic sheeting and subject to the site-specific Erosion and Sediment Control Plan and the requirements of 40 CFR §761.65.

Provisions will be made for erosion and sedimentation control at the work perimeter during the pilot study activities. Erosion and sedimentation controls may include silt fence, hay bales, mulching, and other measures as warranted to prevent erosion. Additional details regarding erosion and sedimentation control are provided in **Section 8.0**.

5.5 Exclusion Zone Designation

An exclusion zone will be designated and marked at each work area. Exclusion zone will have restricted access. Entrance and exit of exclusion zone will be clearly marked. The area disturbed within exclusion zone will be limited to immediate vicinity of the debris pile/Berm. All equipment used for the pilot study of each debris pile/Berm will be dedicated to that pile and remain within exclusion zone until the pilot study of that debris pile/Berm is complete and decontamination procedures, as discussed in **Section 5.2** have been completed. Erosion and sedimentation controls will be focused on the extent or perimeter of the exclusion zone.

6.0 DECISION UNIT SEGREGATION AND TSCA CHARACTERIZATION

The scope of work defined in this section is intended to address the first pilot study objective, introduced in **Section 1.2** of this Work Plan, to determine if PCB remediation wastes are present within the piles and soil berm at the Site, and if so, their ranges of PCB concentrations.

6.1 DU Segregation

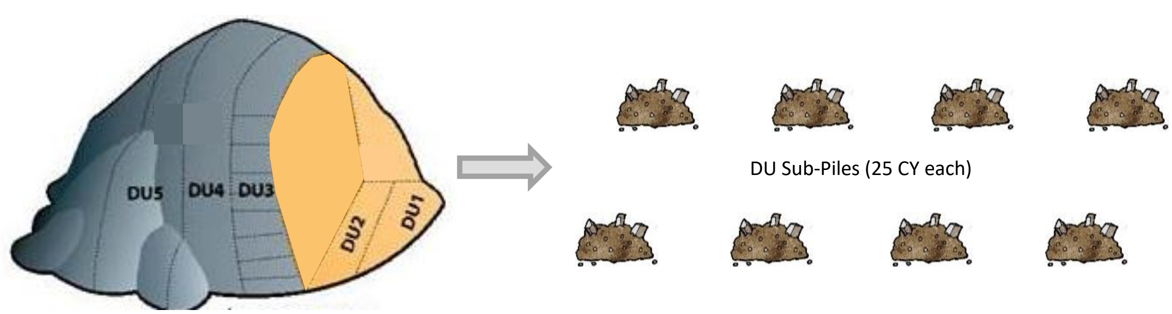
The locations of the DUs within the piles identified in **Section 4.2** will be determined in the field based on accessibility, the heterogeneous nature of the materials observed in the DU, and available space to implement the initial pre-sorting, sampling, and mechanical screening discussed in the following sections. The location and approximate volume of the DU to be removed will be delineated and marked using survey flags or similar. However, the actual DU volume (200 CY) will be measured as it is segregated from the pile/berm using the volume of the heavy equipment bucket. All material in the DU segregated from the pile/berm will either be placed on plastic in the immediate vicinity of the pile/berm it is removed from to prevent contact with Site surface soil.

6.2 PCB Characterization Sampling

An "as found" or "in-place" sample will be collected every 25 CY directly from the center of the excavator bucket as the DU is being removed from the larger Berm/pile for a total of eight samples from each DU. Each of the eight samples will be 4 ounces in volume and will be analyzed for PCBs (as Aroclors) by USEPA Method 8082.

As illustrated in the following **Figure 6-1**, each 25-CY sub-pile will be segregated and kept separate from the other 25-CY sub-piles but within the DU exclusion zone until PCB analytical results have been received. This will be accomplished by storing each individual sub-pile in its own container or by separating the sub-piles within the exclusion zone with plastic sheeting and a barrier between each sub pile (hay bales or similar) as shown in **Figure 6-1.** The sampling methodology and sample density described above is proposed for this pilot study only. If the decision is made to proceed with a full-scale IRM and/or the piles/berm are removed as part of the final remedy for the Site, the sampling methodology and sample density may be modified as appropriate based on applicable regulations and the results of this pilot study.

Figure 6-1 – DU Sub-Pile Segregation



The number of discrete samples proposed for this pilot study is summarized in the following **Table 6-1**.

Table 6-1 Proposed PCB Characterization Sample Summary

Pile ID	Number of 200-CY DUs for Pilot Testing	Number of Discrete Samples per Pile/Berm
1	1	8
4	1	8
7	2	16
8	1	8
15	1	8
Berm	4	32
	Total	**80**

In regards to the Berm DUs, if the DU contains a previous discrete screening sample location, as discussed in **Section 3.5.2**, the PCB concentration from that screening sample will represent the 25-CY sub-pile where the discrete screening sample was located in lieu of collecting a sample from the excavator bucket as described above.

For the purpose of this pilot study only, under the Self-Implementing disposal option, all DU sub-piles with PCB concentrations >1 mg/kg will be disposed of off-site. If the decision is made to proceed with the IRM, a risk-based remedy, in accordance with 40 CFR §761.61(c), may be the more appropriate regulatory vehicle for developing appropriate criteria for the IRM and/or the final remedy, and, based on the risk-based remedial approach, it may be appropriate that materials containing PCBs >1 mg/kg but <50 mg/kg remain onsite as part of the beneficial reuse and final remedial efforts.

The PCB analytical results will be used to determine whether the DU sub-piles will be disposed of off-site as: 1) a non-hazardous waste (PCB concentrations >1 mg/kg but <50 mg/kg), 2) disposed of off-site as a TSCA/hazardous waste (PCB concentrations ≥50 mg/kg), or 3) can remain on-site to be addressed during either a full-scale IRM or the final remedy (PCB concentrations ≤1 mg/kg). The PCB analytical results from the pilot study will not be used to determine disposal for the remainder of the pile and Berm volumes not tested, but will be used to inform as to the likelihood of potential disposal options and associated costs for evaluation during the IRM FFS.

Once the PCB results are received, additional waste characterization samples will be collected as required by the selected off-site disposal facility(s). Management of the DU material while awaiting characterization and off-site disposal is discussed in **Section 8.0**. All PCB waste destined for off-site disposal will be disposed in accordance with 40 CFR §761.61(a)(5)(i)(B)(2)(ii) and 40 CFR §761.61(a)(5)(i)(B)(2)(iii).

Upon the completion of waste characterization for off-site disposal, further separation of the DU material is proposed as part of the pilot study to meet landfill requirements and to meet pilot study goals as further discussed in **Section 7.0**.

7.0 FURTHER DU SEPARATION, HANDLING, AND SUPPLEMENTAL SAMPLING

The scope of work defined in this section is intended to address the second pilot study objective, introduced in **Section 1.2** of this Work Plan, to determine if a portion of the material in the debris piles and Berm can be reused or recycled as part of a full-scale IRM or final remedy instead of being disposed of in an off-site landfill. The material in the designated DU is anticipated to be a mix of soil and debris. After the PCB characterization sampling of the DU is complete, as described in **Section 6.2**, the DU sub-piles will be further separated based on size and material type for the following reasons:

- Required by off-site disposal facility:
  - Tires will need to be separated and quartered for disposal to be accepted by a landfill
  - Material/debris must be less than 3-ft x 3-ft x3-ft in size
- Information gathering purposes to meet pilot study goals:
  - Inform as to the Berm/debris pile composition
  - Assess relative sizes and volumes of separated materials
  - Assess the efficacy and cost effectiveness of physical separation techniques and determine the range of PCB concentrations for possible end use (recycle, reuse, off-site disposal) for a full-scale IRM consistent with the tenants of green remediation.

Further DU sub-pile separation will be accomplished through a pre-sort process and a mechanical screening process discussed in further detail in the following subsections. All equipment coming into contact with potentially PCB-impacted soils will be decontaminated between DUs in accordance with the procedures outlined in **Section 5.2**.

7.1 Pre-Sorting

Pre-sorting, if necessary, will be conducted to remove large items that are not mixed with soils within the DU sub-piles. An excavator with a grapple or a bucket with a thumb attachment will initiate sorting the DU sub-piles and segregate the materials onto plastic into three piles based on the DU sub-pile PCB concentrations (PCBs <1 mg/kg, PCBs $\geq$1 mg/kg but <50 mg/kg, and PCBs $\geq$50 mg/kg). During the initial pre-sorting, the relative size and volume of separated material from each DU will be recorded. After the pre-sorting is complete, the material in the three piles will be reduced in size, if necessary, as discussed in **Section 7.3**, and handled in accordance with **Section 8.0**.

7.2 Mechanical Screening

During the mechanical screening, the following will be assessed and recorded:

- Equipment and separation processes
- Separation process rates and potential efficiencies
- Probable ratio of soil vs. other materials
- Relative sizes and volumes of separated materials.

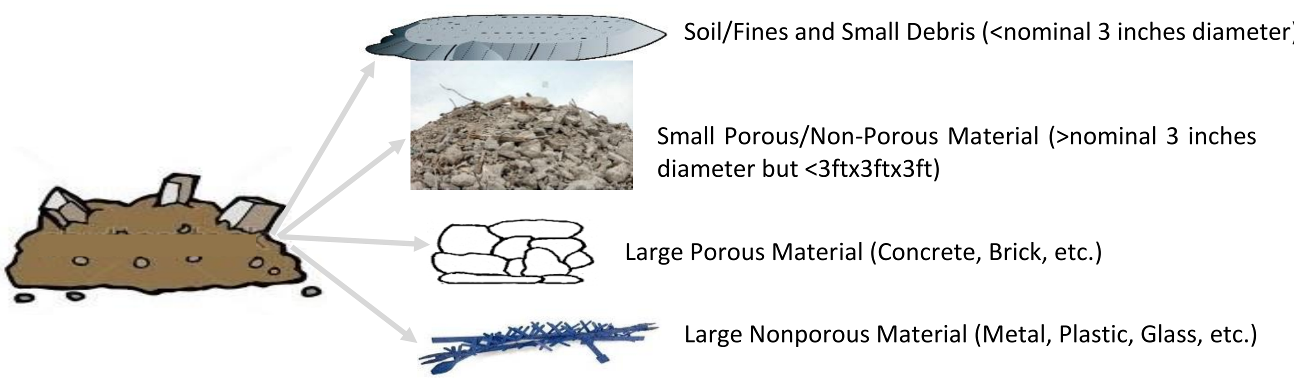
Mechanical screening equipment, such as a Trommel Screen, will be set up on-site to process the DU sub-piles which are anticipated to be a mixture of soil and debris. The Trommel will be placed immediately adjacent to the DU exclusion zone where accessible. Plastic sheeting will be placed under and around the trommel equipment to capture the separated materials resulting from the mechanical screening process**.** The DU sub-piles will be mechanically screened in order of their PCB concentrations as determined by the sampling described in **Section 6.2**. For each DU, the sub-piles with PCB concentrations $\leq$1 mg/kg will be processed first, followed by those sub-piles with PCB concentrations >1 mg/kg but <50 mg/kg, and then finally those sub-piles with PCB concentrations $\geq$50 mg/kg. If there are sufficient sub-piles within the DU with concentrations <50 mg/kg to meet the pilot study goals of 1) informing as to the Berm/debris pile composition and 2) assessing relative sizes and volumes of separated materials, then those sub-piles with PCB concentrations ≥50 mg/kg will not be mechanically screened.

The Trommel Screen will be equipped with a combination of nominal 3-inch punch plates and 3-inch screens. The punch plates will be installed in the initial contact section of the drum to absorb the shock created when the larger material initially enters from the feed hopper, while still providing some pass-through for finer graded materials as they are separated. The 3-inch screens will provide further separation once the initial partitioning of the feed material occurs, thus maximizing the results of the separation process. Material will be fed into the hopper on the Trommel Screen by an excavator equipped with a bucket or a front-end loader. The feed hopper passes material into the drum, which will rotate, and tumble, allowing anything smaller than 3-inches to fall through the punch plates and screens. Fine-graded materials that fall through will drop on to a center conveyor; which in turn will discharge onto a side-discharge conveyor; which in turn will discharge directly into a stockpile, or onto a final stacking conveyor to allow room for larger volumes. Any material larger than 3-inches will continue through the Trommel and be discharged onto a stacking conveyor, which will then discharge the material into a stockpile, separate from the fines. For purposes of this pilot study, all materials resulting from the mechanical screening process, describe above, will be placed on plastic and covered or in a covered storage container to avoid contact with the Site surface soils or other materials in the debris piles or Berm.

The trommel will be decontaminated between DUs following the procedures outlined in **Section 5.2**.

Depending on the contents of the DU sub-piles, this may result in a variety of separated materials including non-porous materials such as metal, plastic, and porous materials like brick and concrete (**Figure 7-1**).

Figure 7-1 DU Material Separation Illustration



7.3 Additional Handling

After the initial pre-sort and mechanical screening processes are complete, material will be mechanically reduced to less than 3-ft x 3-ft x 3-ft in size to meet off-site disposal facility requirements. Mechanical reduction may include crushing for large pieces of concrete and cutting for large pieces of metal. Whole tires with loose soil in them will be quartered and soil will be removed, collected, and managed with soils from the DU. These activities will be performed within the exclusion zone and over plastic.

7.4 Supplemental Sampling

The materials generated from the initial pre-sort and mechanical screening of each DU may include the following:

- Large non-porous and porous material
- Soil and debris less than nominal 3 inches in diameter
- Porous/non-porous material greater than nominal 3 inches in diameter.

Management of these materials while awaiting off-site disposal is discussed in **Section 8.0**. Further sampling of these materials, as discussed in the following subsections, is proposed as part of the pilot study to determine the range of PCB concentrations for possible end use (recycle, reuse, off-site disposal) for a full-scale IRM. These results will not be used to characterize the DUs generated during the pilot study for off-site disposal. However, in the case where the supplemental sampling results of material originally characterized with PCB concentrations <50 mg/kg (during the PCB characterization sampling discussed in Section 6.2) indicates that PCB concentrations are ≥50 mg/kg, the material will be disposed of off-site with other material with concentrations ≥50 mg/kg. If the supplemental sampling results of material originally characterized with PCB concentrations ≥50 mg/kg (during the PCB characterization sampling discussed in Section 6.2) indicates that PCB concentrations are <50 mg/kg, the material will still be disposed of off-site with other material with concentrations ≥50 mg/kg for the purposes of this pilot study only.

7.4.1 Large Non-Porous and Porous Material

Once pre-sorted, the large and flat non-porous materials will be sampled pursuant to TSCA Subpart P, 40 CFR §761.302(a)(2) for large, non-porous surfaces with non-uniform source concentrations of PCBs. A select number of surfaces, to be determined in the field based on size and composition, will be wipe-sampled for PCB analysis in the laboratory. Pre-sorted, large porous material will not be sampled as part of the pilot test. However, small porous material will be sampled during the pilot study in accordance **Section 7.4.3**.

7.4.2 Soil and Debris Less Than Nominal Three Inches in Diameter

As mentioned earlier in this Work Plan, it is anticipated that the primary PCB containing component of the debris piles and Berm will be the soils within these units. Therefore, no further sampling of the soil and debris less than nominal three inches in diameter is proposed. Results of the PCB characterization sampling, as described in **Section 6.2**, will be utilized to determine the PCB concentration of this material.

7.4.3 Small Porous/Non-Porous Materials Greater Than Nominal Three Inches in Diameter but less than 3-ft x 3-ft x 3-ft

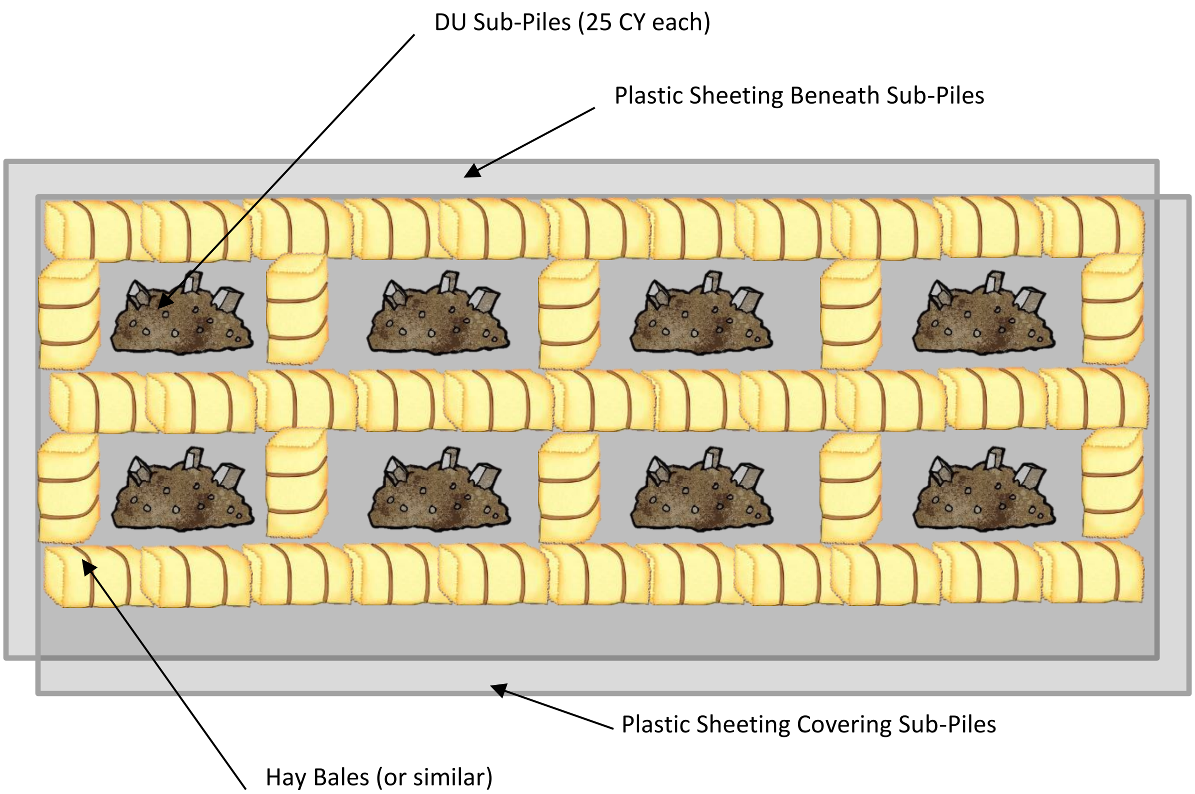
It is anticipated that a sub-pile of small porous/non-porous material greater than nominal 3 inches in diameter that would be impractical to further separate, will be generated from the mechanical screening of each DU. A sample will be collected every 25 CY as the material is being separated and exiting the screening equipment. Each sample will consist of 4 ounces of porous material only and will analyzed for PCBs using USEPA Method 8082. Supplemental sampling of the small non-porous material is not part of this pilot study, only sampling of large non-porous material as discussed in **Section 7.4.1**.

8.0 MATERIAL MANAGEMENT

8.1 Materials Pending PCB Characterization Results

All DU sub-piles pending PCB characterization results will be staged within the established exclusions zone located in the immediate vicinity of the pile/berm of origin. Each DU's sub-piles will be kept segregated, stored on plastic sheeting, covered with plastic sheeting, and surrounded with appropriate storm water controls (see **Figure 8-1**). Alternatively, the segregated materials may be stored and covered in individual storage containers. Each pile and/or container will be labeled according to their originating pile number, DU number, type of material, and date of generation. Once characterization results are received, each stored pile/container will be labeled accordingly and managed in accordance with either **Section 8.2** or **Section 8.3** below.

Figure 8-1 Typical DU Sub-Pile Staging Scenario



8.2 Material Management Based on PCB Characterization Results

Once the PCB characterization results are received, DU sub-piles will be further separated and sampled by DU as described in **Section 7.0** and then consolidated based on whether the PCB concentration is <u><</u>1 mg/kg, >1 mg/kg but <50 mg/kg, or <u>></u>50 mg/kg. Each resulting consolidation unit will be managed in accordance with the following subsections.

8.2.1 Material with PCB Concentrations Greater Than or Equal to 50 mg/kg

Material with PCB concentrations greater than or equal to 50 mg/kg, as determined by the PCB characterization sampling and analyses discussed in **Section 6.2** of this Work Plan, will be disposed off-site in a hazardous waste landfill permitted by USEPA under section 3004 of RCRA, or by a State authorized landfill under section 3006 of RCRA, or a PCB disposal facility approved under 40 CFR §761.61. While on-site awaiting off-site disposal, this material will be managed, accumulated, and handled in accordance with all applicable TSCA regulations and requirements (40 CFR §761.65(c)(9)). If this material is also determined to be hazardous pursuant to 6 NYCRR Part 370, et. Seq. (RCRA), the materials will also be managed, accumulated, and handled in accordance with all applicable RCRA regulations and requirements. Materials may be stored under roof if building capacity is available, in covered containers, or on and under plastic sheeting with storm water controls. Material storage will be inspected weekly to assess the integrity of the plastic sheeting, storage container, and/or storm water controls where applicable.

8.2.2 Material with PCB Concentrations Less Than 50 mg/kg

Material generated during the pilot study with PCB concentrations less than 50 mg/kg will be managed as a hazardous waste or a non-hazardous waste as discussed in the following subsections.

8.2.2.1 Hazardous Material

While on-site awaiting off-site disposal, all hazardous material will be managed, accumulated, and handled in accordance with all applicable RCRA regulations and requirements (6 NYCRR Part 370, et. Seq.)). Materials will be labeled accordingly and may be stored under roof if building capacity is available, in covered containers, or on and under plastic sheeting with storm water controls. Material storage will be inspected monthly to assess the integrity of the plastic sheeting, storage container, and/or storm water controls where applicable. All hazardous material will be disposed of off-site in RCRA Subtitle C landfill.

8.2.2.2 Non-Hazardous Material

For the purpose of this pilot study only, under this Self-Implementing disposal option, all DU material with PCB concentrations >1 mg/kg, as determined by the PCB characterization sampling (**Section 6.2**), and which is determined be non-hazardous based on waste characterization analyses, will be disposed of off-site. If the decision is made to proceed with the IRM, a risk-based remedy, in accordance with 40 CFR §761.61(c), may be the more appropriate regulatory vehicle for developing appropriate criteria for the IRM and/or the final remedy, and, based on the risk-based remedial approach, it may be appropriate that materials containing PCBs >1 mg/kg but <50 mg/kg remain onsite as part of the final remedial efforts.

While on-site awaiting off-site disposal, all non-hazardous material will be managed, accumulated, and handled in accordance 40 CFR §261 and 40 CFR §761.65. Materials will be labeled accordingly and may be stored under roof if building capacity is available, in covered containers, or on and under plastic sheeting with storm water controls. Material storage will be inspected monthly to assess the integrity of the plastic sheeting, storage container, and/or storm water controls where applicable.

8.2.3 Tires

Whole tires from DUs with PCB concentrations <50 mg/kg and removed as part of the pre-sorting process discussed in **Section 7.1** of this Work Plan which are free of soil will be landfilled without characterization. Whole tires with loose soil in them will be quartered and soil will be removed, collected, and managed with soils from the DU. These activities will be performed within the exclusion zone and over plastic. Resulting pieces of tires free from soil will be landfilled without characterization.

8.3 Management of Investigative-Derived Waste (IDW)

All investigation-derived waste (IDW), such as decontamination water and personal protective equipment (PPE), generated during implementation of the IRM FFS Work Plan will be collected in properly labeled United Stated Department of Transportation (USDOT)-approved storage containers (55-gallon drums) or a small bulk roll-off container and grouped by environmental matrix (e.g., soil, water, PPE/plastic, construction debris, etc.). If drums are used, as they are filled they will be tracked and given unique identification codes based on the following:

- A prefix indicating the Site where the drum was generated and the drums contents: i.e., UW – Universal Waste plus S – Soil, W – Water, P – PPE/Plastic, and C&D – Construction Debris
- Following the prefix and a hyphen will be the drum's chronological number of generation. For example, drum UWS-1 is the first drum of the project generated and is filled with soil
- As drums are generated, their identification code, date of generation, contents, source (i.e., drill cuttings from location x, purge water from well y), and the dated sampled will be entered on a tracking table and on the drum label.

The drums (or roll-off container) will be stored at a locked, temporary fenced location to be decided during the kickoff meeting, which will be completed prior to the start of the field investigation. Subsequently, the waste soils and water will be characterized according to the requirements of the off-site disposal facility.

8.4 Potential Off-Site Disposal Facilities

Based on the characterization of the DU material, the following **Table 8-1** summarizes the types of off-site disposal facilities may be utilized for waste disposal during the pilot study.

Table 8-1 Potential Off-Site Disposal Facilities

Type of Waste	Off-Site Disposal Facility
Material with PCBs greater than or equal to 50 mg/kg	PCB disposal facility permitted under TSCA (40 CFR §761.61).
Material with PCBs greater than or equal to 50 mg/kg and a RCRA hazardous waste	RCRA Subtitle C landfill with TSCA Permit for the disposal of PCB-contaminated materials
RCRA hazardous waste	RCRA Subtitle C landfill
Non-hazardous waste	RCRA Subtitle D landfill
Whole tires (from DUs with PCB concentrations <50 mg/kg	Municipal solid waste landfill

9.0 PILOT STUDY APPROACH SUMMARY

As discussed in detail in the previous sections of this Work Plan, the following approach for the pilot study is proposed. The pilot study will include selection of representative debris piles and portions of the Berm, into defined DUs as discussed in **Section 4.0**. These DUs will be segregated from the larger pile and characterized individually using the PCB characterization sampling methodology proposed in **Section 6.2**. This will inform as to the composition of the interior of the piles/Berm while also meeting TSCA requirements for determining "as found' or in-situ concentrations of PCBs. Each DU and its sub-piles will be managed as a separate unit throughout the pilot study process to address the concerns identified in 40 CFR §761.61 in regards to eliminating the potential for mixing or dilution to occur. The PCBs results from the PCB characterization sampling (**Section 6.2**) will be used to define the concentrations of PCBs in material generated during the pilot study and determine the type of facility selected for off-site disposal. Once it has been determined which DUs have concentrations of PCBs ≥50 mg/kg and which DUs have concentrations of PCBs <50 mg/kg, additional characterization samples will be collected to meet off-site disposal facility requirements.

For the purpose of this pilot study only, under the Self-Implementing disposal option, all DU sub-piles with PCB concentrations >1 mg/kg will be disposed of off-site. If the decision is made to proceed with the IRM, a risk-based remedy, in accordance with 40 CFR §761.61(c), may be the more appropriate regulatory vehicle for developing appropriate criteria for the IRM and/or the final remedy, and, based on the risk-based remedial approach, it may be appropriate that materials containing PCBs >1 mg/kg but <50 mg/kg remain on-site as part of the beneficial reuse and final remedial efforts.

Following the waste characterization for off-site disposal, a mechanical screening process will be employed to separate larger graded materials from fine-graded soils. This process is necessary to separate large debris that will not be accepted by the off-site disposal facility (greater than 3-ft x 3-ft x 3-ft) and to inform as to the Berm/debris pile composition, relative sizes and volumes of separated materials, and assess the technical feasibility and implementability of physical separation. The separation components may consist of construction equipment including a 5-metric-ton and a 25-metric-ton excavator, or comparable equipment, with various attachments (grapples, sheer, etc.), a front-end loader, mechanical screening equipment, Powerscreen 830 Trommel Screen or comparable machine, material handling conveyors and various support equipment.

After the porous and non-porous materials have been separated from the soil within the DU, supplemental sampling of the porous and non-porous material will be performed to determine whether or not the PCBs are present predominantly in the soil versus the porous/non-porous material. The results of this sampling are for assessment purposes only and will not be used to characterize the DU material generated during pilot study for off-site disposal. These supplemental sampling results along with the information gathered during the physical separation process will be used to determine the efficacy (technical feasibility, implementability, and cost effectiveness) of further separation of the DU material for possible recycle or reuse, consistent with the tenants of green remediation, during the design of the full-scale IRM or final remedy for addressing the removal of the debris piles/Berm.

The pilot test approach is illustrated in **Figure 9-1**.

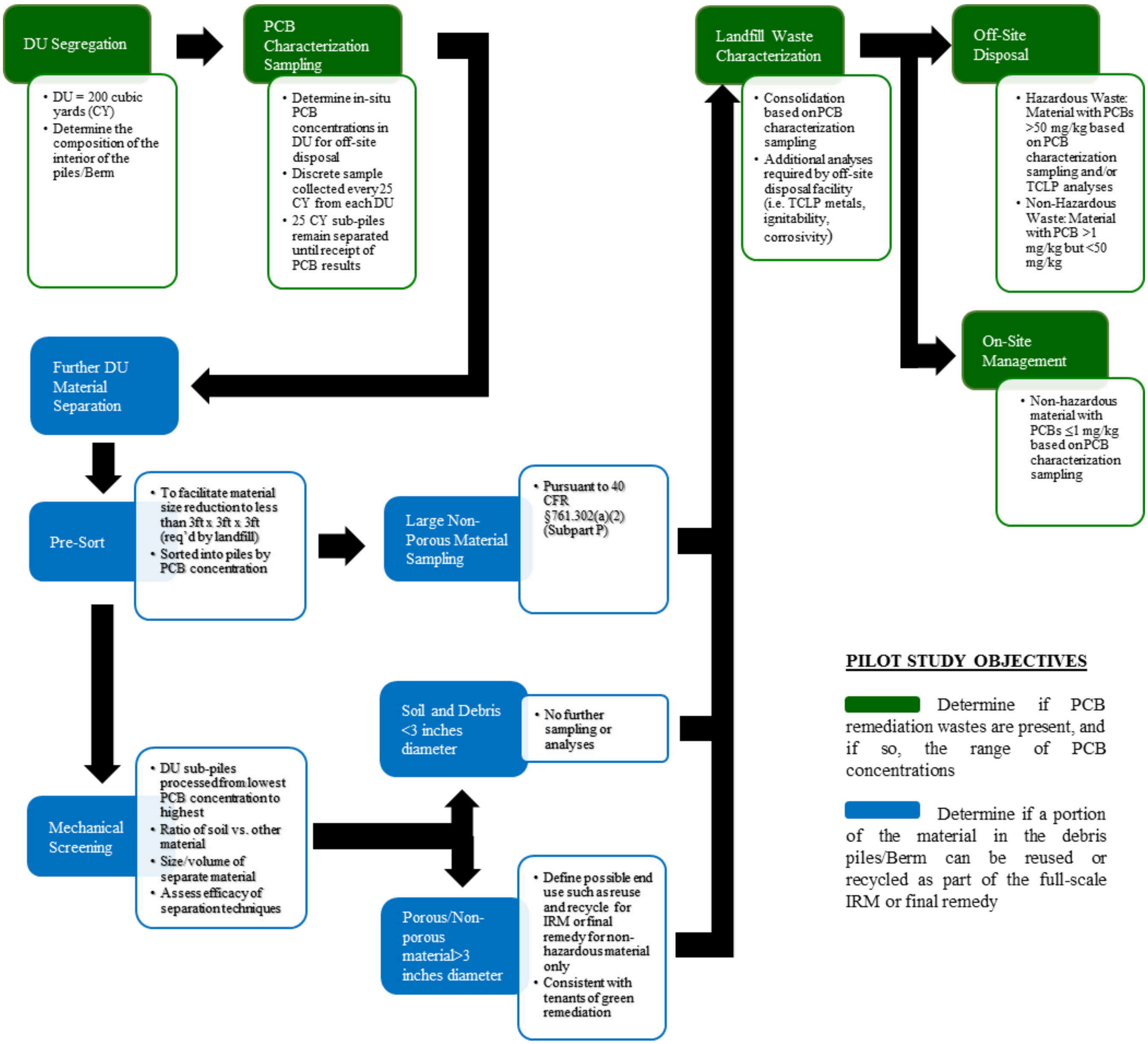


Figure 9-1 Proposed Pilot Study Approach

10.0 PROJECT ORGANIZATION, DELIVERABLES, AND SCHEDULE

10.1 Project Organization

This Work Plan will be implemented for ELGUA by EHS Support, an environmental contractor (the Contractor), who will arrange for field investigation and analytical services and provide an on-site field representative(s) to oversee all subcontractors under the direction of the NYSDEC. Contractor will also perform the data interpretation and reporting tasks. Key contacts for this project are as follows:

ELGUA Project Managers
Jeff Simmons, Vice President – Operations
378 Gros Blvd, Suite 3
Herkimer, New York 13350
Telephone: (315) 574-1680 ext. 208
Email: jeff.simmons@elguticaalloys.com

Michael Kroeger
Kremerskamp 16 D-47138
Duisburg Germany
Telephone: 49-(0) 203-4501-296
Email: MKroeger@elg.de

Contractor Client/Technical Manager
Andrew Patz, CHMM
EHS Support LLC
Telephone: (412) 215-7703
Email: andy.patz@ehs-support.com

Contractor Project Director
Kristin A. VanLandingham, PE
EHS Support LLC
Telephone: (850) 251-0582
Email: k.vanlandingham@ehs-support.com

Contractor Project Manager/Field Supervisor
Mark Smith
EHS Support LLC
Telephone: (850) 544-9219
Email: mark.smith@ehs-support.com

Contractor Quality Assurance Officer (QAO)
Chrissy Peterson
EHS Support LLC
Telephone: (412) 925-1385
Email: chrissy.peterson@ehs-support.com

NYSDEC Project Manager
Parag Amin, P.E.
NYSDEC
Telephone: (518) 402-9662
Email: parag.amin@dec.ny.gov

USEPA TSCA Contact
James S. Haklar, Ph.D.
USEPA
Telephone: (732) 906-6817
Email: Haklar.James@epa.gov

10.2 Deliverables

Based on the program of works described above, the following deliverables will be submitted to USEPA and/or NYSDEC for review and approval.

10.2.1 Updated Plans

After Work Plan approval, any modifications to the Work Plan must be approved by NYSDEC. In addition, any modifications to the approved Work Plan regarded the PCB characterization sampling approaches or other TSCA-compliance related issues must be approved by USEPA.

Prior to implementation, the Quality Assurance Project Plan (QAPP) and the Health and Safety Plan (HASP) will be updated to address issues specific to the pilot study and provided to NYSDEC. The QAPP identifies the quality assurance objectives for the measurement data, the quality assurance/quality control (QA/QC) procedures to be used in the field, the sample chain-of-custody methods to be used, and the analytical procedures to be followed. It is noted that PCB characterization sample extraction and analysis must follow 40 CFR §761.272. The QAPP also includes a description of the way each type of data is to be used. The HASP outlines health and safety risks and procedures for all Site workers and visitors. Included in the HASP is information regarding physical and chemical hazards at the Site, emergency procedures and contact information, incident reporting procedures, and the route to the closest hospital.

10.2.2 IRM FFS Report

Upon completion of the pilot study as proposed in this Work Plan, an IRM FFS Report will be prepared in accordance with DER-10 Section 3.14 and submitted to NYSDEC for review and approval. The IRM FFS Report is a required deliverable by NYSDEC under AOC Index# AS-0850-15-03. A courtesy copy of the IRM FFS Report will also be provided to USEPA for their files.

The IRM FFS Report will summarize the following information, at a minimum, collected during the pilot study associated with debris piles and soil Berm:

- Separation techniques and process rates
- Probable ratio of soil vs. other materials
- Relative sizes and volumes of other separated materials
- The range of PCB concentrations in soils and other separated materials.

In addition, the IRM FFS Report will specify provisions for inspection/monitoring and maintenance of segregated materials stored on site, containment systems, and storm water collection systems resulting from the pilot study and periodic submissions of the inspection reports.

The information collected during the pilot study will be used to:

- Identify and screen potential remedial technologies and process options for an IRM/final Site remedy
- Develop volume estimates for soil, porous material, and non-porous material
- Develop and evaluate potential alternatives for an IRM addressing the debris piles and soil Berm at the Site
- Define the proper end use of soils and other materials
    - Recycle
    - Reuse
    - Off-Site Disposal
- Allow ELGUA to determine whether a full-scale IRM is both feasible and appropriate.

The feasibility of an IRM will be determined, in part, based on the following:

- Successful separation to allow for characterization of the various materials within the debris piles and Berm
- Achieving process rates that allow scaling to a full implementation from the pilot phase.

10.3 Schedule

An estimated project schedule for the IRM FFS described herein is provided below.

- December 8, 2015: Submit Draft IRM FFS Work Plan
- March 15, 2016: NYSDEC Review and Comment
- May 19 and 26, 2016: Discuss IRM FFS Work Plan and suggested path forward with USEPA
- June 28, 2016: Submit Draft IRM FFS Work Plan to USEPA and NYSDEC
- August 1, 2016: USEPA Comments
- October 14, 2016: Meeting with USEPA to discuss comments and sampling approaches
- November 30, 2016: Resubmit IRM FFS Work Plan to USEPA and NYSDEC
- January 31, 2017: USEPA and NYSDEC approval of Work Plan
- May-June 2017: Implement Pilot Study
- October 2017: Submit IRM FFS Report
- January 2018: Submit IRM Work Plan to USEPA and NYSDEC (may require public participation)
- March 2018: Approval of IRM Work Plan by USEPA and NYSDEC (USEPA has indicated that it may require additional time to review and approve)
- May 2018: Implement IRM, if ELGUA's IRM Work Plan is approved.

ELGUA and its technical consultants will establish routine communication with the NYSDEC technical staff to assist resolving any issues that may delay the schedule. ELGUA cannot be held responsible for any delays due to inclement weather, contractor availability, permit acquisition, NYSDEC review and approval time, NYSDEC availability for splitting samples, applicable citizen participation requirements, or any other delays outside of its control.

11.0 REFERENCES

Badea, S. L., Mustafa, M., Lundstedt, S., and Tysklind, M. (2014). Leachability and desorption of PCBs from soil and their dependency on pH and dissolved organic matter. Science of The Total Environment 499, 220–227.

Blacker, S. and Goodman, D. (1994a). *An Integrated Approach for Efficient Site Cleanup*. *Environmental Science & Technology* 28(11).

Blacker, S. and Goodman, D. (1994b). *Case Study: Application at a Superfund Site*. *Environmental Science & Technology* 28(11).

Casey, G.D. and Reynolds, R.J. (1988). *Hydrogeology of the stratified-drift aquifers in the Utica area, Oneida and Herkimer Counties, New York: U.S*. Geological Survey Water-Resources Investigations Report 88-4195, map series, 8 sheets.

Duffield, G.M. (2007). AQTESOLV for Windows Version 4.0 Professional, HydroSOLVE, Inc.

E&E. (2015). *Final Remedial Investigation Report*, Universal Waste, Inc. Off-Site Study Area Operable Unit 02, Utica, Oneida County, New York, Site No. 633009. August 2015.

EHS Support. (2014). *Draft Interim Limited On-Site Remedial Investigation Report*. Universal Waste, Utica, New York, #633009. August 2014.

EHS Support. (2015). *Supplemental Limited On-Site Remedial Investigation Work Plan – Phase 2 (Revision 3)*. Universal Waste, Utica, New York, #633009. February 27.

Gan, D. R., Berthouex, P. M. (1994). Disappearance and crop uptake of PCBs from sludge-amended farmland. Water Environ Res 1994;66:54–69.

Interstate Technology Regulatory Council (ITRC). (2012). *Incremental Sampling Methodology*, February 2012.

Mackay, D. M. and Cherry, J. A. (1989). Groundwater contamination: pump-and-treat remediation. Second of a five-part series. Environ Sci Technol 1989;23:630–6.

Myers, J. C. (1997). Geostatistical Error Management: Quantifying Uncertainty for Environmental Sampling and Mapping. New York: Van Nostrand Reinhold.

Neptune, D., Brantly, E. P., Messner, M. J., and Michael, D. I. (1990). "Quantitative Decision Making in Superfund: A Data Quality Objectives Case Study." *Hazardous Materials Control* 44(2):358-63.

NYSDEC. (2006). *Recommended Decision and Hearing Report*, in the Matter of the Delisting Petition for the Universal Waste, Inc. Inactive Hazardous Waste Disposal Site. April 5.

NYSDEC. (2010). Technical Guidance for Site Investigation and Remediation (DER-10), May 3.

Olcott, P.G. (1995). *Groundwater Atlas of the United States* – Connecticut, Maine, Massachusetts, New Hampshire, New York, Rhode Island, Vermont: U.S. Geological Survey Hydrologic Atlas HA 730-M.

Oliver, B. G. (1985). Desorption of chlorinated hydrocarbons from spiked and anthropogenically contaminated sediments. Chemosphere 1985;14:1087–106.

S&W. (2000). *Preliminary Site Assessment* – Universal Waste, Inc. Property, Utica, New York, January.

State of Hawaii Department of Health, Hazard Evaluation and Emergency Response Department (HEER). (2011). Guidance for the Evaluation of Imported and Exported Fill Material, Including Contaminant Characterization of Stockpiles, October 2011

State of Hawaii Department of Health, Office of Hazard Evaluation and Emergency Response (HEER). (2008). *Technical Guidance Manual for the Implementation of the Hawaii State Contingency Plan, Section 4; Soil Sample Collection Approaches*, November 2008.

USDA. (1913). *Soil Survey of Oneida County*, New York. United States Department of Agriculture, Field Operations of the Bureau of Soils. 1913. Pg. 87-88.

USEPA. (1992). *Supplemental Guidance to RAGS: Calculating the Concentration Term* 1(1). OERR Publication 9285.7-08I. NTIS PB92-963373. Office of Emergency and Remedial Response. Cincinnati, OH.

USEPA. (1993). *Data Quality Objectives Process for Superfund.* Interim Final Guidance. EPA/540.G-93/071. Office of Solid Waste and Emergency Response. Washington, DC.

USEPA. (1996). *Soil Screening Guidance User's Guide* (9355.4-23). Office of Solid Waste and Emergency Response. Washington, DC. http://www.epa.gov/superfund/resources/soil/index.htm

USEPA. (2002). *RCRA Waste Sampling Draft Technical Guidance Planning, Implementation, and Assessment*. Office of Solid Waste and Emergency Response. Washington, DC. August.

W.F. Cosulich Associates. (1996). *Utica Alloys Facility Supplemental Investigation Report*. Utica Alloys, Inc., Utica, New York. April.

Wang, X.; Lu, J.; Xu, M.; Xing, B. (2008). Sorption of Pyrene by Regular and Nanoscaled Metal Oxide Particles: Influence of Adsorbed Organic Matter. Environ. Sci. Technol. 2008, 42, (19), 7267-72.

TABLES

TABLE 3-1
GROUNDWATER ELEVATIONS

UNIVERSAL WASTE
UTICA, NY

Well ID	Date of Construction	Screened Interval (ft bgs)	Well Depth (ft bgs)	Ground Surface Elevation (ft NAVD88)	TOC Elevation (ft NAVD88)	October 12, 2015		
						Depth to Groundwater (ft btoc)	Groundwater Elevation (ft NAVD88)	River Elevation
B-5	August-83	17-22	22.43	404.03	406.94	9.41	397.53	NA
B-7	August-83	13.5-23.5	23.48	404.50	406.90	8.02	398.88	NA
MW-6R	June 20, 2000	2.5-12.5	12.94	404.92	406.93	7.73	399.20	NA
MW-8R	August 1, 2008	3-13	13.13	404.29	406.74	5.37	401.37	NA
MW-9	May 20, 2005	2-12	12.51	404.29	404.08	3.72	400.36	NA
MW-B3R	June 20, 2000	3-13	13.11	403.56	405.60	5.11	400.49	NA
UW-1	March 27, 2014	4-14	13.70	406.69	409.50	10.20	399.30	NA
UW-2	March 27, 2014	3.5-13.5	12.81	405.92	408.79	9.09	399.70	NA
UW-3	March 28, 2014	3.5-13.5	13.35	405.02	407.70	8.20	399.50	NA
UW-4	March 28, 2014	4-14	13.52	407.18	410.04	10.57	399.47	NA
UW-5	March 28, 2014	5-15	14.50	409.99	413.01	13.52	399.49	NA
UW-6	March 31, 2014	3-13	12.96	405.87	408.63	9.15	399.48	NA
UW-7	March 31, 2014	4-14	14.83	405.40	408.38	9.15	399.23	NA
River Level Measurement Locations								
Upstream	March 12, 2015	NA	NA	406.92	NA	9.93	NA	396.99
Downstream	March 12, 2015	NA	NA	406.88	NA	14.08	NA	392.80

Notes:
ft NAVD88 = feet North American Vertical Datum of 1988
ft bgs = feet below ground surface
ft btoc = feet below top of casing
NA = not applicable
Monitoring well locations shown on Figure 2-1 of the IRM FFS Work Plan

TABLE 3-3
BERM GRAB SAMPLE RESULTS

UNIVERSAL WASTE
UTICA, NY

Sample ID	BM-1	BM-2	BM-3	BM-4	BM-5	BM-6	BM-7	BM-8	BM-9
Sample Depth	1 '	2'	2'	1.5'	1'	2'	1'	6"	1'
Sample Date	10/25/2013	10/25/2013	10/25/2013	10/25/2013	10/25/2013	10/25/2013	10/25/2013	10/25/2013	10/25/2013
Analysis Date	11/3/2013	11/3/2013	11/3/2013	11/3/2013	11/2/2013	11/2/2013	11/2/2013	11/3/2013	11/3/2013
	Concentration (mg/kg)								
Aroclor 1016	12 UJ	12 UJ	10 UJ	12 UJ	11 UJ	12 UJ	1.2 U	110 U	3 UJ
Aroclor 1221	12 UJ	12 UJ	10 UJ	12 UJ	11 UJ	12 UJ	1.2 U	110 U	3 UJ
Aroclor 1232	12 UJ	12 UJ	10 UJ	12 UJ	11 UJ	12 UJ	1.2 U	110 U	3 UJ
Aroclor 1242	12 UJ	22 J	10 UJ	12 UJ	11 UJ	12 UJ	1.2 U	110 U	5 J
Aroclor 1248	12 UJ	12 UJ	R	12 UJ	R	12 UJ	1.2 U	110 U	3 UJ
Aroclor 1254	240 J	62 J	110 J	97 J	140 J	120 J	1.2 U	1200 J	30 J
Aroclor 1260	27 J	12 UJ	12 J	13 J	15 J	15 J	1.2 U	110 U	4.5 J
Total PCB Concentration	267 J	84 J	122 J	110 J	155 J	135 J	1.2 U	1200 J	39.5 J

Sample ID	BM-10	BM-11	BM-12	BM-13	BM-14	BM-15	BM-16	BM-17	BM-18
Sample Depth	20"	1.5'	1.5'	1.5'	4'	4'	4'	1.5'	1.5'
Sample Date	10/25/2013	10/25/2013	10/28/2013	10/25/2013	10/28/2013	10/28/2013	10/28/2013	10/28/2013	10/28/2013
Analysis Date	11/3/2013	11/3/2013	11/5/2013	11/4/2013	11/5/2013	11/5/2013	11/5/2013	11/5/2013	11/5/2013
	Concentration (mg/kg)								
Aroclor 1016	13 UJ	12 UJ	5 UJ	12 UJ	12 UJ	4.7 UJ	4.8 UJ	13 UJ	4.6 UJ
Aroclor 1221	13 UJ	12 UJ	5 UJ	12 UJ	12 UJ	4.7 UJ	4.8 UJ	13 UJ	4.6 UJ
Aroclor 1232	13 UJ	12 UJ	5 UJ	12 UJ	12 UJ	4.7 UJ	4.8 UJ	13 UJ	4.6 UJ
Aroclor 1242	13 UJ	12 UJ	15 J	12 UJ	12 UJ	4.7 UJ	18 J	13 UJ	4.6 UJ
Aroclor 1248	13 UJ	95 J	5 UJ	51 J	12 UJ	4.7 UJ	4.8 UJ	13 UJ	4.6 UJ
Aroclor 1254	89 J	91 J	90 J	55 J	87 J	67 J	150 J	170 J	64 J
Aroclor 1260	14 J	12 J	17 J	12 UJ	16 J	12 J	28 J	13 UJ	12 J
Total PCB Concentration	103 J	198 J	122 J	106 J	103 J	79 J	196 J	170 J	76 J

Sample ID	BM-19	BM-20	BM-21	BM-22	BM-23	BM-24	BM-25
Sample Depth	2'	1.5'	2.5'	3.5'	3'	22"	2'
Sample Date	10/28/2013	10/28/2013	10/28/2013	10/28/2013	10/28/2013	10/25/2013	10/28/2013
Analysis Date	11/5/2013	11/5/2013	11/5/2013	11/5/2013	11/5/2013	11/3/2013	11/5/2013
	Concentration (mg/kg)						
Aroclor 1016	4.2 UJ	2.7 UJ	4.6 UJ	11 UJ	12 UJ	11 UJ	4.3 U
Aroclor 1221	4.2 UJ	2.7 UJ	4.6 UJ	11 UJ	12 UJ	11 UJ	4.3 U
Aroclor 1232	4.2 UJ	2.7 UJ	4.6 UJ	11 UJ	12 UJ	11 UJ	4.3 U
Aroclor 1242	4.2 UJ	2.7 UJ	4.6 UJ	11 UJ	12 UJ	14 J	4.3 U
Aroclor 1248	4.2 UJ	2.7 UJ	4.6 UJ	11 UJ	12 UJ	11 UJ	4.3 U
Aroclor 1254	54 J	45 J	15 J	140 J	190 J	70 J	71 J
Aroclor 1260	12 J	10 J	4.6 UJ	26 J	35 J	11 UJ	4.3 U
Total PCB Concentration	66 J	55 J	15 J	166 J	225 J	84 J	71 J

Notes:
mg/kg = milligrams per kilogram
U = Indicates the analyte was analyzed for but not detected.
J = Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value.
R = Data rejected by third party validator.
Highlighted results indicate total PCB concentrations equal to or greather than 50 mg/kg
Sample locations are shown on Figure 3-4 of the IRM FFS Work Plan

EHS Support consider it done

TABLE 3-4
BERM TRENCH COMPOSITE SAMPLE RESULTS

UNIVERSAL WASTE SITE
UTICA, NY

Location ID / ChemName	Restricted Industrial Use SCO (mg/kg)	Unrestricted Use SCO (mg/kg)	BCT-01	BCT-02	BCT-03	BCT-04	BCT-05	BCT-06	BCT-07	BCT-08
			6/17/2015	6/17/2015	6/17/2015	6/17/2015	6/17/2015	6/17/2015	6/17/2015	6/17/2015
VOLATILE ORGANIC COMPOUNDS										
		Date Analyzed	**6/23/15**	**6/23/15**	**6/22/15**	**6/22/15**	**6/23/15**	**6/23/15**	**6/23/15**	**6/23/15**
Acetone	1,000	0.05	0.157	0.105	0.217	0.159	0.145	0.233	0.0921	0.0557
SEMIVOLATILE ORGANIC COMPOUNDS										
		Date Analyzed	**6/25/15**	**6/25/15**	**6/25/15**	**6/25/15 /25/1**	**6/25/15**	**6/25/15 /25/1**	**6/25/15**	**6/25/15**
Benzo(A)Anthracene	11	1	2.9	3.17	8.4	1.63	2.49	2.69	5.75	2.18
Benzo(A)Pyrene	1.1	1	**2.62**	**3.38**	**8.78**	**1.72**	**2.54**	**2.7**	**5.46**	**2.19**
Benzo(B)Fluoranthene	11	1	2.5	2.85	7.49	1.55	2.06	2.42	4.45	1.87
Benzo(K)Fluoranthene	110	0.8	1.99	2.81	7.42	1.34	2.18	1.84	4.6	2.01
Chrysene	110	1	2.86	3.35	8.68	1.7	2.45	2.58	5.4	2.08
Dibenz(A,H)Anthracene	1.1	0.33	0.563 J	0.656 J	**1.93**	0.372 J	0.594	0.487 J	1.1 J	0.595 J
Indeno(1,2,3-C,D)Pyrene	11	0.5	1.66	1.97	4.87	1.09	1.72	1.72	3.21	1.74
METALS										
		Date Analyzed	**Multiple Dates**	**Multiple Dates**	**Multiple Dates**	**Multiple Dates**	**Multiple Dates**	**Multiple Dates**	**Multiple Dates**	**Multiple Dates**
Arsenic	16	13	**20.6**	**21.7**	**27.6**	**22.1**	**19.9**	**17.9**	**27.5**	**22.8**
Barium	10,000	350	534	411	1,260	445	477	282	529	483
Cadmium	60	2.5	12.1	25.2	38.2	18.4	27.7	16.9	**64.1**	27.7
Copper	10,000	50	981	1,360	5,190	1,390	1,130	2,160	1,940	3,070
Lead	3,900	63	1,470	2,640	3,600	3,020	1,700	1,160	2,990	2,080
Manganese	10,000	1,600	929	1,810	1,960	1,120	1,280	1,230	1,390	1,090
Mercury	5.7	0.18	4.9	**6.2**	**7.7**	4.1	**6.4**	**9.7**	**9.6**	**8**
Nickel	10,000	30	968	1,130	2,370	6,590	4,950	3,930	4,910	8,330
Silver	6,800	2	0.55 U	5.5	5.1	2.3	5.2	0.6	6	0.5
Zinc	10,000	109	2,500	5,310	5,380	4,120	3,930	2,780	4,380	3,210
POLYCHLORINATED BIPHENYLS										
		Date Analyzed	**6/25/15**	**6/25/15**	**6/25/15**	**6/25/15 /25/1**	**6/25/15**	**6/25/15 /25/1**	**6/25/15**	**6/25/15**
PCB-1248 (Aroclor 1248)	25	0.1	0.0012 U	0.0011 U	14.3 J	0.0011 U	0.001 U	17.5 J	0.001 U	0.0011 U
PCB-1254 (Aroclor 1254)	25	0.1	**59.5 J**	**247 J**	**38.2 J**	**42.8 J**	**60.6 J**	**38.1 J**	**58.2 J**	**58.1 J**
PCB-1260 (Aroclor 1260)	25	0.1	10.7 J	0.00046 U	3.57 J	0.00047 U	0.00043 U	3.72 J	0.00043 U	7.27 J
Total PCBs	25	0.1	**70.20 J**	**247.00** J	**56.07 J**	**42.80** J	**60.60** J	**59.32** J	**58.20** J	**65.37 J**
HERBICIDES										
		Date Analyzed	**6/22/15**	**6/22/15**	**6/22/15**	**6/22/15 /22/1**	**6/22/15**	**6/23/15**	**6/23/15**	**6/23/15**
Pentachlorophenol	55	0.8	0.0061 U	0.0071 J	0.0106 J	0.0073 J	0.0089 J	0.0056 U	1.16 J	0.0099 J

Notes:

Constituent not detected at detection limit XXX

Constitutent detected XXX

Shaded cell indicates exceedance above the Unrestricted Use Soil Cleanup Objectives (SCOs) per 6 NYCRR Part 375 effective December 14, 2006

Bold indicates exceedance above the Restricted Industrial Use Soil Cleanup Objectives (SCOs) per 6 NYCRR Part 375 efffective December 14, 2006.

mg/kg - microgram per kilogram

U = Indicates the anlayte was analyzed for but not detected.

J = Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value.

Sample locations shown on Figure 3-4 of the IRM FFS Work Plan

EHS Support consider it done

TABLE 3-5
DEBRIS PILE COMPOSITE SAMPLE RESULTS

UNIVERSAL WASTE
UTICA, NY

Chemical Name	NYSDEC SCOs - Protection of Public Health - Industrial (mg/kg)	NYSDEC SCOs - Unrestricted Use (mg/kg)	UNITS	DP-01 6/4/2015	DP-02 6/4/2015	DP-03 6/4/2015	DP-04 6/4/2015	DP-05 6/4/2015	DP-06 6/4/2015	DP-07 6/4/2015	DP-08 6/4/2015
GENERAL CHEMISTRY											
Corrosivity	-	-	none	8	8.1	8.1	8.1	8	8	8	8
Cyanide	10,000	27	mg/kg	0.14 U	0.13 U	0.13 U	0.14 U	0.15 U	0.21	0.15 U	0.13 U
Ignitability	-	-	Deg_F	230 >	230 >	230 >	230 >	230 >	230 >	230 >	230 >
Reactivity	-	-	mg/kg	1.8 U	1.7 U	1.7 U	1.8 U	1.8 U	1.8 U	1.9 U	1.6 U
Solids, Percent	-	-	%	83.7	90.5	87.2	83.3	82.2	83.1	77.2	91.2
Sulfide Reactive	-	-	mg/kg	59 U	55 U	57 U	60 U	61 U	60 U	64 U	54 U
HERBICIDES (SW846 8151)											
2,4 Db	-	-	mg/kg	0.013 U	0.012 U	0.012 U	0.013 U	0.013 U	0.013 U	0.014 U	0.012 U
2,4,5-T (Trichlorophenoxyacetic Acid)	-	-	mg/kg	0.0052 U	0.0048 U	0.005 U	0.0053 U	0.0054 U	0.0052 UJ	0.0057 UJ	0.0048 UJ
2,4-D (Dichlorophenoxyacetic Acid)	-	-	mg/kg	0.0316	0.0037 U	0.0038 U	0.021 J	0.0041 U	0.004 U	0.0043 U	0.0037 U
Dalapon	-	-	mg/kg	0.013 U	0.012 U	0.012 U	0.013 U	0.013 U	0.013 U	0.014 U	0.012 U
Dicamba	-	-	mg/kg	0.0073 U	0.0067 U	0.0069 U	0.0073 U	0.0074 U	0.0072 U	0.0078 U	0.0066 U
Dichloroprop	-	-	mg/kg	0.0059 U	0.0055 U	0.0056 U	0.006 U	0.0061 U	0.0059 U	0.0064 U	0.0054 U
Dinoseb	-	-	mg/kg	0.011 U	0.01 U	0.011 U	0.011 U	0.012 U	0.011 U	0.012 U	0.01 U
MCPA	-	-	mg/kg	1.4 U	1.2 U	1.3 U	1.4 U	1.4 U	1.3 U	1.5 U	1.2 U
MCPP	-	-	mg/kg	0.65 U	0.6 U	0.62 U	0.65 U	0.66 U	0.64 U	0.7 U	0.59 U
Pentachlorophenol	55	0.8	mg/kg	0.0077 J	0.0077 J	0.0075 J	0.0276 J	0.085 J	0.0205 J	0.0174 J	0.0053 J
Silvex (2,4,5-TP)	1,000	3.8	mg/kg	0.0046 U	0.0043 U	0.0044 U	0.0047 U	0.0048 U	0.0046 U	0.005 U	0.0043 U
METALS											
Aluminum	-	-	mg/kg	9,020	8,400	11,000	16,700	9,330	8,190	12,600	7,510
Antimony	-	-	mg/kg	15.1 J	54.1 J	30.8 J	25.1 J	9 J	18.8 J	7.5 J	17 UJ
Arsenic	16	13	mg/kg	**23.1**	**24.3**	**26.5**	**30.1**	**25.7**	**28.6**	**17.9**	**24.6**
Barium	10,000	350	mg/kg	**374**	282	192	**476**	**376**	**425**	323	253
Beryllium	2,700	7.2	mg/kg	3.7 U	7 U	1.8 U	3.8 U	3.8 U	3.8 U	20 U	7 U
Cadmium	60	2.5	mg/kg	**20.7**	**15.5**	**11**	**19.7**	**15.8**	**18.8**	**15.8**	**20.3**
Calcium	-	-	mg/kg	42,400	55,300	31,900	39,100	20,300	24,900	27,100	74,100
Chromium, Total	-	-	mg/kg	2,960	16,300	8,070	1,460	1,010	4,420	561	17,800
Cobalt	-	-	mg/kg	365	842	700	431	386	452	152	875
Copper	10,000	50	mg/kg	**1,880**	**4,130**	**2,690**	**1,670**	**4,070**	**969**	**2,420**	**4,520**
Iron	-	-	mg/kg	144,000	179,000	240,000	154,000	177,000	177,000	116,000	176,000
Lead	3,900	63	mg/kg	**1,320**	**1,240**	**668**	**1,770**	**1,620**	**1,290**	**5,040**	**887**
Magnesium	-	-	mg/kg	5,470	6,510	4,920	5,310	4,300	4,300	4,040	8,440
Manganese	10,000	1,600	mg/kg	1,390	**2,370**	**2,070**	1,400	1,290	**1,720**	1,130	**2,120**
Mercury	5.7	0.18	mg/kg	**1.9** J	**2**	**1.1**	**2.6**	**2**	**3**	**3.4**	**3.3**
Nickel	10,000	30	mg/kg	**4,670**	**14,400**	**8,670**	**3,450**	**2,360**	**3,170**	**1,220**	**14,000**
Potassium	-	-	mg/kg	2,300 U	870 U	2,200 U	2,300 U	2,400 U	2,400 U	2,500 U	870 U
Selenium	6,800	3.9	mg/kg	4.6 U	8.7 U	8.9 U	4.7 U	4.8 U	4.8 U	5.1 U	17 U
Silver	6,800	2	mg/kg	**17.2**	**17.7**	**4.3**	**885**	2.4 U	**5.6**	**22.7**	**16.5**
Sodium	-	-	mg/kg	2,300 U	870 U	2,200 U	2,300 U	2,400 U	2,400 U	2,500 U	870 U
Thallium	-	-	mg/kg	4.6 U	4.4 U	4.4 U	4.7 U	4.8 U	4.8 U	5.1 U	17 U
Vanadium	-	-	mg/kg	61 J	112	82.2	173	33.1	67	49	122
Zinc	10,000	109	mg/kg	**2,780**	**2,970**	**2,650**	**2,940**	**5,200**	**2,720**	**3,310**	**3,180**

TABLE 3-5
DEBRIS PILE COMPOSITE SAMPLE RESULTS

UNIVERSAL WASTE
UTICA, NY

Chemical Name	NYSDEC SCOs - Protection of Public Health - Industrial (mg/kg)	NYSDEC SCOs - Unrestricted Use (mg/kg)	UNITS	DP-01 6/4/2015	DP-02 6/4/2015	DP-03 6/4/2015	DP-04 6/4/2015	DP-05 6/4/2015	DP-06 6/4/2015	DP-07 6/4/2015	DP-08 6/4/2015
METALS (TCLP)											
Arsenic	-	-	µg/l	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Barium	-	-	µg/l	2,500	2,200	1,800	2,400	2,100	2,300	1,700	2,100
Cadmium	-	-	µg/l	86	100	72	110	110	130	88	110
Chromium, Total	-	-	µg/l	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Lead	-	-	µg/l	160	460	120	370	190	340	480	57
Mercury	-	-	µg/l	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Selenium	-	-	µg/l	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
Silver	-	-	µg/l	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
PESTICIDES (SW846 8081B)											
Aldrin	1.4	0.005	mg/kg	0.0015 UJ	0.0014 UJ	0.0015 UJ	0.0015 UJ	0.0016 UJ	0.0015 UJ	0.0016 UJ	0.0014 UJ
Alpha Bhc (Alpha Hexachlorocyclohexane)	6.8	0.02	mg/kg	0.0088 J	0.0019 UJ	0.0019 UJ	0.002 UJ	0.0021 UJ	0.002 UJ	0.0021 UJ	0.0018 UJ
Alpha Endosulfan	920	2.4	mg/kg	0.0021 UJ	0.0019 UJ	0.002 UJ	0.0021 UJ	0.0021 UJ	0.002 UJ	0.0022 UJ	0.0019 UJ
Beta Bhc (Beta Hexachlorocyclohexane)	14	0.036	mg/kg	0.002 UJ	0.0018 UJ	0.0019 UJ	0.002 UJ	0.002 UJ	0.0019 UJ	0.0021 UJ	0.0018 UJ
Beta Endosulfan	920	2.4	mg/kg	0.0018 U	0.0017 U	0.0018 U	0.0019 U	0.0019 U	0.0018 U	0.0019 U	0.0017 U
cis-Chlordane	47	0.094	mg/kg	0.0029 UJ	0.0027 UJ	0.0028 UJ	0.003 UJ	0.003 UJ	0.0029 UJ	0.0031 UJ	0.0027 UJ
Delta BHC (Delta Hexachlorocyclohexane)	1,000	0.04	mg/kg	0.0019 UJ	0.0018 UJ	0.0019 UJ	0.002 UJ	0.002 UJ	0.0019 UJ	0.002 UJ	0.0018 UJ
Dieldrin	2.8	0.005	mg/kg	0.0018 UR	0.0017 UR	0.0017 UR	0.0018 UR	0.0018 UR	0.0017 UR	0.0019 UR	0.0016 UR
Endosulfan Sulfate	920	2.4	mg/kg	0.0019 U	0.0018 U	0.0018 U	0.0019 U	0.002 U	0.0019 U	0.002 U	0.0017 U
Endrin	410	0.014	mg/kg	0.0025 UJ	0.0023 UJ	0.0024 UJ	0.0025 UJ	0.0025 UJ	0.0024 UJ	0.0026 UJ	0.0023 UJ
Endrin Aldehyde	-	-	mg/kg	0.0019 U	0.0018 U	0.0019 U	0.0019 U	0.002 U	0.0019 U	0.002 U	0.0018 U
Endrin Ketone	-	-	mg/kg	0.0021 U	0.0019 U	0.002 U	0.0021 U	0.0021 U	0.002 U	0.0022 U	0.0019 U
Gamma Bhc (Lindane)	23	0.1	mg/kg	0.0017 UJ	0.0016 UJ	0.0017 UJ	0.0017 UJ	0.0018 UJ	0.0017 UJ	0.0018 UJ	0.0016 UJ
Heptachlor	29	0.042	mg/kg	0.0022 U	0.002 U	0.0021 U	0.0022 U	0.0022 U	0.0021 U	0.0023 U	0.002 U
Heptachlor Epoxide	-	-	mg/kg	0.0018 UR	0.0017 UR	0.0018 UR	0.0018 UR	0.0019 UR	0.0018 UR	0.0019 UR	0.0017 UR
Methoxychlor	-	-	mg/kg	0.0034 UJ	0.0032 UJ	0.0033 UJ	0.0035 UJ	0.0036 UJ	0.0034 UJ	0.0036 UJ	0.0031 UJ
P,P'-DDD	180	0.0033	mg/kg	0.002 UJ	0.0019 UJ	0.0019 UJ	0.002 UJ	0.0021 UJ	0.002 UJ	0.0021 UJ	0.0018 UJ
P,P'-DDE	120	0.0033	mg/kg	0.0015 U	0.0014 U	0.0015 U	0.0015 U	0.0016 U	0.0015 U	0.0016 U	0.0014 U
P,P'-DDT	94	0.0033	mg/kg	0.002 UR	0.0019 UR	0.002 UR	0.0021 UR	0.0021 UR	0.002 UR	0.0021 UR	0.0019 UR
Toxaphene	-	-	mg/kg	0.025 UR	0.023 U	0.024 U	0.025 U	0.026 U	0.025 U	0.026 U	0.023 U
trans-Chlordane	-	-	mg/kg	0.0024 UJ	0.0022 UJ	0.0023 UJ	0.0024 UJ	0.0024 UJ	0.0023 UJ	0.0025 UJ	0.0022 UJ
PETROLEUM HYDROCARBONS											
Gasoline C4-C12	-	-	mg/kg	2.32 J	2.05 J	4.05 J	2.25 J	5.27 J	3.57 J	4.64 J	3.7 J
Total Petroleum Hydrocarbons Range C9 Through C36	-	-	mg/kg	723	955	484	432	918	467	440	681
POLYCHLORINATED BIPHENYLS (SW846 8082)											
PCB-1016 (Aroclor 1016)	25	0.1	mg/kg	0.0011 U	0.001 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0012 U	0.001 U
PCB-1221 (Aroclor 1221)	25	0.1	mg/kg	0.001 U	0.0009 U	0.00093 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0009 U
PCB-1232 (Aroclor 1232)	25	0.1	mg/kg	0.0012 U	0.001 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.001 U
PCB-1242 (Aroclor 1242)	25	0.1	mg/kg	0.0012 U	0.0011 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0013 U	0.0011 U
PCB-1248 (Aroclor 1248)	25	0.1	mg/kg	0.0014 U	0.0012 U	0.0013 U	0.0014 U	0.0014 U	0.0014 U	0.0014 U	0.0012 U
PCB-1254 (Aroclor 1254)	25	0.1	mg/kg	**12.70** J	**12.30** J	**6.05** J	**48.10** J	**35.50** J	**38.20** J	**67.80** J	**10.80** J
PCB-1260 (Aroclor 1260)	25	0.1	mg/kg	**2.29** J	**1.96** J	**1.02** J	**4.95** J	**4.28** J	**3.97** J	**7.40** J	**1.31** J
Total Aroclors	25	0.1	mg/kg	**14.99**	**14.26**	**7.07**	**53.05**	**39.78**	**42.17**	**75.20**	**12.11**

TABLE 3-5
DEBRIS PILE COMPOSITE SAMPLE RESULTS

UNIVERSAL WASTE
UTICA, NY

Chemical Name	NYSDEC SCOs - Protection of Public Health - Industrial (mg/kg)	NYSDEC SCOs - Unrestricted Use (mg/kg)	UNITS	DP-01	DP-02	DP-03	DP-04	DP-05	DP-06	DP-07	DP-08
				6/4/2015	6/4/2015	6/4/2015	6/4/2015	6/4/2015	6/4/2015	6/4/2015	6/4/2015
SEMIVOLATILE ORGANIC COMPOUNDS (SW846 8270D)											
2,4,5-Trichlorophenol	-	-	mg/kg	0.14 U	0.069 U	0.014 U	0.014 U	0.073 U	0.015 U	0.015 U	0.013 U
2,4,6-Trichlorophenol	-	-	mg/kg	0.14 U	0.068 U	0.014 U	0.014 U	0.072 U	0.015 U	0.015 U	0.013 U
2,4-Dichlorophenol	-	-	mg/kg	0.16 U	0.079 U	0.016 U	0.017 U	0.084 U	0.017 U	0.018 U	0.016 U
2,4-Dimethylphenol	-	-	mg/kg	0.93 U	0.45 U	0.092 U	0.094 U	0.48 U	0.098 U	0.1 U	0.088 U
2,4-Dinitrophenol	-	-	mg/kg	1.4 U	0.69 U	0.14 U	0.14 U	0.73 U	0.15 U	0.15 U	0.13 U
2,4-Dinitrotoluene	-	-	mg/kg	0.38 U	0.18 U	0.038 U	0.038 U	0.19 U	0.04 U	0.041 U	0.036 U
2,6-Dinitrotoluene	-	-	mg/kg	0.14 U	0.069 U	0.014 U	0.014 U	0.073 U	0.015 U	0.015 U	0.013 U
2-Chloronaphthalene	-	-	mg/kg	0.15 U	0.074 U	0.015 U	0.016 U	0.079 U	0.016 U	0.017 U	0.015 U
2-Chlorophenol	-	-	mg/kg	0.13 U	0.062 U	0.013 U	0.013 U	0.066 U	0.014 U	0.014 U	0.012 U
2-Methylnaphthalene	-	-	mg/kg	0.15 U	0.07 U	0.0373 J	0.0393 J	0.074 U	0.0516 J	0.0333 J	0.0154 J
2-Methylphenol (O-Cresol)	1,000	0.33	mg/kg	0.23 U	0.11 U	0.022 U	0.023 U	0.12 U	0.024 U	0.025 U	0.021 U
2-Nitroaniline	-	-	mg/kg	0.14 U	0.069 U	0.014 U	0.014 U	0.073 U	0.015 U	0.015 U	0.013 U
2-Nitrophenol	-	-	mg/kg	0.15 U	0.073 U	0.015 U	0.015 U	0.078 U	0.016 U	0.017 U	0.014 U
3,3'-Dichlorobenzidine	-	-	mg/kg	0.29 U	0.14 U	0.028 U	0.029 U	0.15 U	0.03 U	0.031 U	0.027 U
3-Nitroaniline	-	-	mg/kg	0.31 U	0.15 U	0.031 U	0.031 U	0.16 U	0.033 U	0.034 U	0.029 U
4,6-Dinitro-2-Methylphenol	-	-	mg/kg	0.71 U	0.34 U	0.071 U	0.072 U	0.36 U	0.075 U	0.077 U	0.067 U
4-Bromophenyl Phenyl Ether	-	-	mg/kg	0.14 U	0.069 U	0.014 U	0.015 U	0.074 U	0.015 U	0.016 U	0.014 U
4-Chloro-3-Methylphenol	-	-	mg/kg	0.14 U	0.07 U	0.014 U	0.015 U	0.074 U	0.015 U	0.016 U	0.014 U
4-Chloroaniline	-	-	mg/kg	0.14 U	0.069 U	0.014 U	0.014 U	0.073 U	0.015 U	0.015 U	0.013 U
4-Chlorophenyl Phenyl Ether	-	-	mg/kg	0.18 U	0.084 U	0.017 U	0.018 U	0.089 U	0.018 U	0.019 U	0.016 U
4-Methylphenol (P-Cresol)	1,000	0.33	mg/kg	0.28 U	0.13 U	0.027 U	0.028 U	0.14 U	0.029 U	0.03 U	0.026 U
4-Nitroaniline	-	-	mg/kg	0.14 U	0.069 U	0.014 U	0.014 U	0.073 U	0.015 U	0.015 U	0.013 U
4-Nitrophenol	-	-	mg/kg	1.1 U	0.51 U	0.11 U	0.11 U	0.55 U	0.11 U	0.12 U	0.1 U
Acenaphthene	1,000	20	mg/kg	0.15 U	0.125 J	0.122	0.0767 J	0.0847 J	0.152	0.128	0.021 J
Acenaphthylene	1,000	100	mg/kg	0.344 J	0.224 J	0.227	0.183	0.225 J	0.156	0.378	0.0802 J
Acetophenone	-	-	mg/kg	0.13 U	0.061 U	0.0445 J	0.0495 J	0.316 J	0.0439 J	0.0338 J	0.0526 J
Anthracene	1,000	100	mg/kg	0.513 J	0.443 J	0.472	0.346	0.407 J	0.555	0.668	0.1 J
Atrazine	-	-	mg/kg	0.29 U	0.14 U	0.028 U	0.029 U	0.15 U	0.03 U	0.031 U	0.027 U
Benzaldehyde	-	-	mg/kg	0.57 U	0.27 U	0.056 U	0.057 U	0.29 U	0.06 U	0.062 U	0.054 U
Benzo(A)Anthracene	11	1	mg/kg	**1.77**	**1.2**	**1.36**	**1.36**	**1.26**	**1.73**	**2.29**	0.302
Benzo(A)Pyrene	1.1	1	mg/kg	**1.9**	**1.29**	**1.31**	**1.52**	**1.37**	**1.74**	**2.26**	0.334
Benzo(B)Fluoranthene	11	1	mg/kg	**1.74**	**1.4**	**1.23**	**1.48**	**1.3**	**1.49**	**2.17**	0.326
Benzo(G,H,I)Perylene	1,000	100	mg/kg	1.53	1.1	0.894	1.03	1.06	1.03	1.36	0.272
Benzo(K)Fluoranthene	110	0.8	mg/kg	**1.75**	**1.09**	**1.08**	**1.23**	**1.18**	**1.47**	**1.76**	0.279
Benzyl Butyl Phthalate	-	-	mg/kg	1.96 J	2.64	1.89	1.84	1.49 J	0.633	2.41	1.05
Biphenyl (Diphenyl)	-	-	mg/kg	0.14 U	0.069 U	0.014 U	0.014 U	0.073 U	0.0155 J	0.015 U	0.013 U
Bis(2-Chloroethoxy) Methane	-	-	mg/kg	0.13 U	0.064 U	0.013 U	0.013 U	0.068 U	0.014 U	0.015 U	0.013 U
Bis(2-Chloroethyl) Ether (2-Chloroethyl Ether)	-	-	mg/kg	0.17 U	0.084 U	0.017 U	0.017 U	0.089 U	0.018 U	0.019 U	0.016 U
Bis(2-Chloroisopropyl) Ether	-	-	mg/kg	0.21 U	0.099 U	0.02 U	0.021 U	0.1 U	0.022 U	0.022 U	0.019 U
Bis(2-Ethylhexyl) Phthalate	-	-	mg/kg	1.6 J	2.73	1.36	1.44	3.24	0.788	1.17	0.487
Caprolactam	-	-	mg/kg	1.4 U	0.69 U	0.14 U	0.14 U	0.73 U	0.15 U	0.15 U	0.13 U

Chemical Name	NYSDEC SCOs - Protection of Public Health - Industrial (mg/kg)	NYSDEC SCOs - Unrestricted Use (mg/kg)	UNITS	DP-01	DP-02	DP-03	DP-04	DP-05	DP-06	DP-07	DP-08
				6/4/2015	6/4/2015	6/4/2015	6/4/2015	6/4/2015	6/4/2015	6/4/2015	6/4/2015
Carbazole	-	-	mg/kg	0.246 J	0.229 J	0.182	0.148	0.199 J	0.193	0.221	0.0386 J
Chrysene	110	1	mg/kg	**1.75**	**1.28**	**1.33**	**1.41**	**1.37**	**1.81**	**2.29**	0.307
Dibenz(A,H)Anthracene	1.1	0.33	mg/kg	**0.435** J	**0.348** J	**0.336**	**0.39**	**0.363** J	**0.39**	**0.487**	0.0966 J
Dibenzofuran	1,000	7	mg/kg	0.16 U	0.076 U	0.0752 J	0.0439 J	0.081 U	0.104 J	0.0669 J	0.015 U
Diethyl Phthalate	-	-	mg/kg	0.14 U	0.069 U	0.014 U	0.014 U	0.073 U	0.015 U	0.015 U	0.013 U
Dimethyl Phthalate	-	-	mg/kg	0.17 U	0.187 J	0.0652 J	0.0264 J	0.084 U	0.017 U	0.0479 J	0.196 J
Di-N-Butyl Phthalate	-	-	mg/kg	0.491 J	0.363 J	0.244 J	0.269 J	0.596 J	0.201 J	0.344	0.829
Di-N-Octylphthalate	-	-	mg/kg	0.089 U	0.043 U	0.0088 U	0.009 U	0.046 U	0.0094 U	0.0097 U	0.0084 U
Fluoranthene	1,000	100	mg/kg	2.99	2.4	2.66	2.2	2.35	3.5	3.69	0.523
Fluorene	1,000	30	mg/kg	0.15 U	0.123 J	0.133	0.0768 J	0.0997 J	0.205	0.13	0.0285 J
Hexachlorobenzene	12	0.33	mg/kg	0.18 U	0.086 U	0.018 U	0.018 U	0.091 U	0.019 U	0.019 U	0.017 U
Hexachlorobutadiene	-	-	mg/kg	0.17 U	0.079 U	0.016 U	0.017 U	0.084 U	0.017 U	0.018 U	0.016 U
Hexachlorocyclopentadiene	-	-	mg/kg	1.4 U	0.69 U	0.14 U	0.14 U	0.73 U	0.15 U	0.15 U	0.13 U
Hexachloroethane	-	-	mg/kg	0.14 U	0.066 U	0.014 U	0.014 U	0.07 U	0.014 U	0.015 U	0.013 U
Indeno(1,2,3-C,D)Pyrene	11	0.5	mg/kg	**1.29**	**1.02**	**0.857**	**0.967**	**0.916**	**1**	**1.3**	0.253
Isophorone	-	-	mg/kg	0.13 U	0.063 U	0.013 U	0.013 U	0.067 U	0.014 U	0.014 U	0.012 U
Naphthalene	1,000	12	mg/kg	0.18 U	0.088 U	0.0318 J	0.0421 J	0.094 U	0.0413 J	0.0415 J	0.017 U
Nitrobenzene	-	-	mg/kg	0.15 U	0.074 U	0.015 U	0.016 U	0.079 U	0.016 U	0.017 U	0.015 U
N-Nitrosodi-N-Propylamine	-	-	mg/kg	0.16 U	0.079 U	0.016 U	0.016 U	0.083 U	0.017 U	0.018 U	0.015 U
N-Nitrosodiphenylamine	-	-	mg/kg	0.17 U	0.083 U	0.017 U	0.017 U	0.088 U	0.018 U	0.019 U	0.016 U
Pentachlorophenol	55	0.8	mg/kg	0.4 U	0.19 U	0.04 U	0.04 U	0.21 U	0.042 U	0.044 U	0.038 U
Phenanthrene	1,000	100	mg/kg	1.55	1.42	1.5	1.02	1.19	2.46	1.44	0.278
Phenol	1,000	0.33	mg/kg	0.16 U	0.078 U	0.016 U	0.016 U	0.083 U	0.017 U	0.018 U	0.015 U
Pyrene	1,000	100	mg/kg	2.73	2.06	2.3	2.22	1.98	3.05	3.43	0.468
SEMIVOLATILE ORGANIC COMPOUNDS (TCLP)											
1,4-Dichlorobenzene	-	-	µg/l	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U
2,4,5-Trichlorophenol	-	-	µg/l	4.5 U	4.5 U	4.5 U	4.5 U	4.5 U	4.5 U	4.5 U	4.5 U
2,4,6-Trichlorophenol	-	-	µg/l	4.5 U	4.5 U	4.5 U	4.5 U	4.5 U	4.5 U	4.5 U	4.5 U
2,4-Dinitrotoluene	-	-	µg/l	3.7 U	3.7 U	3.7 U	3.7 U	3.7 U	3.7 U	3.7 U	3.7 U
2-Methylphenol (O-Cresol)	-	-	µg/l	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U
4-Methylphenol (P-Cresol)	-	-	µg/l	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U
Hexachlorobenzene	-	-	µg/l	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U
Hexachlorobutadiene	-	-	µg/l	2.9 U	2.9 U	2.9 U	2.9 U	2.9 U	2.9 U	2.9 U	2.9 U
Hexachloroethane	-	-	µg/l	2.8 U	2.8 U	2.8 U	2.8 U	2.8 U	2.8 U	2.8 U	2.8 U
Nitrobenzene	-	-	µg/l	4.8 U	4.8 U	4.8 U	4.8 U	4.8 U	4.8 U	4.8 U	4.8 U
Pentachlorophenol	-	-	µg/l	3.5 U	3.5 U	3.5 U	3.5 U	3.5 U	3.5 U	3.5 U	3.5 U
Pyridine	-	-	µg/l	3.6 UJ	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U
TOTAL ORGANIC HALIDES											
Total Organic Halides (TOX)	-	-	mg/kg	24 U	74.4	24 U	27 U	78.8	24 U	280 U	22 U

TABLE 3-5
DEBRIS PILE COMPOSITE SAMPLE RESULTS

UNIVERSAL WASTE
UTICA, NY

Chemical Name	NYSDEC SCOs - Protection of Public Health - Industrial (mg/kg)	NYSDEC SCOs - Unrestricted Use (mg/kg)	UNITS	DP-01	DP-02	DP-03	DP-04	DP-05	DP-06	DP-07	DP-08
				6/4/2015	6/4/2015	6/4/2015	6/4/2015	6/4/2015	6/4/2015	6/4/2015	6/4/2015
VOLATILE ORGANIC COMPOUNDS (SW846 8260C)											
1,1,1-Trichloroethane	1,000	0.68	mg/kg	0.0005 U	0.0006 U	0.00038 U	0.0004 U	0.0005 U	0.0004 U	0.054 U	0.0004 U
1,1,2,2-Tetrachloroethane	-	-	mg/kg	0.0003 U	0.0003 U	0.00022 U	0.0003 U	0.0003 U	0.0002 U	0.031 U	0.0003 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	-	-	mg/kg	0.0005 U	0.0007 U	0.00043 U	0.0005 U	0.0005 U	0.0005 U	0.061 U	0.0005 U
1,1,2-Trichloroethane	-	-	mg/kg	0.0006 U	0.0007 U	0.00046 U	0.0005 U	0.0006 U	0.0005 U	0.067 U	0.0006 U
1,1-Dichloroethane	480	0.27	mg/kg	0.0005 U	0.0007 U	0.00043 U	0.0005 U	0.0005 U	0.0005 U	0.062 U	0.0005 U
1,1-Dichloroethene	1,000	0.33	mg/kg	0.0009 U	0.0011 U	0.00074 U	0.0009 U	0.0009 U	0.0008 U	0.11 U	0.0009 U
1,2,4-Trichlorobenzene	-	-	mg/kg	0.0006 U	0.0007 U	0.00048 U	0.0006 U	0.0006 U	0.0005 U	0.068 U	0.0006 U
1,2-Dibromo-3-Chloropropane	-	-	mg/kg	0.002 U	0.0024 U	0.0016 U	0.0018 U	0.0019 U	0.0018 U	0.23 U	0.0019 U
1,2-Dibromoethane (Ethylene Dibromide)	-	-	mg/kg	0.0004 U	0.0005 U	0.00032 U	0.0004 U	0.0004 U	0.0004 U	0.046 U	0.0004 U
1,2-Dichlorobenzene	1,000	1.1	mg/kg	0.0005 U	0.0006 U	0.00039 U	0.0005 U	0.0005 U	0.0004 U	0.057 U	0.0005 U
1,2-Dichloroethane	60	0.02	mg/kg	0.0005 U	0.0006 U	0.0004 U	0.0005 U	0.0005 U	0.0004 U	0.057 U	0.0005 U
1,2-Dichloropropane	-	-	mg/kg	0.0006 U	0.0007 U	0.00047 U	0.0005 U	0.0006 U	0.0005 U	0.067 U	0.0006 U
1,3-Dichlorobenzene	560	2.4	mg/kg	0.0005 U	0.0007 U	0.00043 U	0.0005 U	0.0005 U	0.0005 U	0.062 U	0.0005 U
1,4-Dichlorobenzene	250	1.8	mg/kg	0.0006 U	0.0007 U	0.00048 U	0.0006 U	0.0006 U	0.0005 U	0.069 U	0.0006 U
2-Hexanone	-	-	mg/kg	0.0009 U	0.0011 U	0.00073 U	0.0008 U	0.0009 U	0.0008 U	0.1 U	0.0009 U
Acetone	1,000	0.05	mg/kg	**0.255**	**0.188**	**0.2**	**0.242**	**0.339**	**0.28**	0.51 U	**0.0827**
Benzene	89	0.06	mg/kg	0.0029	0.002	0.0013	0.0027	0.0028	0.0027	0.058 U	0.001
Bromodichloromethane	-	-	mg/kg	0.0006 U	0.0007 U	0.00046 U	0.0005 U	0.0006 U	0.0005 U	0.066 U	0.0005 U
Bromoform	-	-	mg/kg	0.0006 U	0.0008 U	0.00051 U	0.0006 U	0.0006 U	0.0006 U	0.074 U	0.0006 U
Bromomethane	-	-	mg/kg	0.0006 U	0.0008 U	0.0005 U	0.0012 J	0.0041	0.0006 U	0.072 U	0.0006 U
Carbon Disulfide	-	-	mg/kg	0.004 J	0.0019 J	0.0027 J	0.0052 J	0.0037 J	0.0028 J	0.063 U	0.0024 J
Carbon Tetrachloride	44	0.76	mg/kg	0.0006 U	0.0007 U	0.00044 U	0.0005 U	0.0005 U	0.0005 U	0.063 U	0.0005 U
Chlorobenzene	1,000	1.1	mg/kg	0.0003 U	0.0004 U	0.00024 U	0.0003 U	0.0003 U	0.0003 U	0.034 U	0.0003 U
Chloroethane	-	-	mg/kg	0.0005 U	0.0007 U	0.00042 U	0.0005 U	0.0005 U	0.0005 U	0.061 U	0.0005 U
Chloroform	700	0.37	mg/kg	0.0007 U	0.0008 U	0.00054 U	0.0006 U	0.0007 U	0.0006 U	0.078 U	0.0006 U
Chloromethane	-	-	mg/kg	0.0016 J	0.0013 J	0.00081 U	0.0009 U	0.0011 J	0.0009 U	0.12 U	0.001 U
Cis-1,2-Dichloroethylene	1,000	0.25	mg/kg	0.0005 U	0.0006 U	0.00039 U	0.0005 U	0.0005 U	0.0004 U	0.056 U	0.0005 U
Cis-1,3-Dichloropropene	-	-	mg/kg	0.0005 U	0.0006 U	0.00041 U	0.0005 U	0.0005 U	0.0005 U	0.058 U	0.0005 U
Cyclohexane	-	-	mg/kg	0.0005 U	0.0007 U	0.00042 U	0.0005 U	0.0005 U	0.0005 U	0.061 U	0.0005 U
Dibromochloromethane	-	-	mg/kg	0.0003 U	0.0004 U	0.00027 U	0.0003 U	0.0003 U	0.0003 U	0.039 U	0.0003 U
Dichlorodifluoromethane	-	-	mg/kg	0.0005 U	0.0007 U	0.00043 U	0.0005 U	0.0005 U	0.0005 U	0.062 U	0.0005 U
Ethylbenzene	780	1	mg/kg	0.0005 U	0.0006 U	0.00041 U	0.0005 U	0.0005 U	0.0005 U	0.059 U	0.0005 U
Isopropylbenzene (Cumene)	-	-	mg/kg	0.0006 U	0.0007 U	0.00048 U	0.0006 U	0.0006 U	0.0005 U	0.068 U	0.0006 U
Methyl Acetate	-	-	mg/kg	0.0011 U	0.0013 U	0.00088 U	0.001 U	0.0011 U	0.001 U	0.13 U	0.001 U
Methyl Ethyl Ketone (2-Butanone)	1,000	0.12	mg/kg	0.0335	0.021	0.013	0.018	0.0192	0.022	0.52 U	0.0043 U
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	-	-	mg/kg	0.0041 J	0.0011 U	0.0007 U	0.0008 U	0.0008 U	0.0008 U	2.85	0.0008 U
Methylcyclohexane	-	-	mg/kg	0.0007 U	0.0009 U	0.00056 U	0.0006 U	0.0007 U	0.0006 U	0.08 U	0.0007 U
Methylene Chloride	1,000	0.05	mg/kg	0.0006 U	0.0007 U	0.00045 U	0.0005 U	0.0005 U	0.0005 U	0.065 U	0.0005 U
Styrene	-	-	mg/kg	0.0004 U	0.0005 U	0.00034 U	0.0004 U	0.0004 U	0.0004 U	0.048 U	0.0004 U
Tert-Butyl Methyl Ether	1,000	0.93	mg/kg	0.0009 U	0.0011 U	0.00071 U	0.0008 U	0.0008 U	0.0008 U	0.1 U	0.0008 U
Tetrachloroethylene (PCE)	300	1.3	mg/kg	0.001 J	0.0005 U	0.00032 U	0.0004 U	0.0004 U	0.0004 U	0.046 U	0.0004 U

TABLE 3-5
DEBRIS PILE COMPOSITE SAMPLE RESULTS

UNIVERSAL WASTE
UTICA, NY

Chemical Name	NYSDEC SCOs - Protection of Public Health - Industrial (mg/kg)	NYSDEC SCOs - Unrestricted Use (mg/kg)	UNITS	DP-01	DP-02	DP-03	DP-04	DP-05	DP-06	DP-07	DP-08
				6/4/2015	6/4/2015	6/4/2015	6/4/2015	6/4/2015	6/4/2015	6/4/2015	6/4/2015
Toluene	1,000	0.7	mg/kg	0.0014 J	0.0013 J	0.00068 J	0.001 J	0.0022 J	0.0015 J	0.062 U	0.0005 J
Trans-1,2-Dichloroethene	1,000	0.19	mg/kg	0.0005 U	0.0007 U	0.00043 U	0.0005 U	0.0005 U	0.0005 U	0.062 U	0.0005 U
Trans-1,3-Dichloropropene	-	-	mg/kg	0.0003 U	0.0003 U	0.00021 U	0.0002 U	0.0003 U	0.0002 U	0.03 U	0.0003 U
Trichloroethylene (TCE)	400	0.47	mg/kg	0.0004 U	0.0005 U	0.00033 U	0.0004 U	0.0004 U	0.0004 U	0.048 U	0.0004 U
Trichlorofluoromethane	-	-	mg/kg	0.001 J	0.0027 J	0.00034 U	0.0004 U	0.0004 U	0.0004 U	0.399	0.0009 J
Vinyl Chloride	27	0.02	mg/kg	0.0007 U	0.0009 U	0.00059 U	0.0007 U	0.0007 U	0.0007 U	0.084 U	0.0007 U
Xylenes	1,000	0.26	mg/kg	0.0005 U	0.0006 U	0.00038 U	0.0004 U	0.0005 J	0.0004 U	0.0762 J	0.0004 U
VOLATILE ORGANIC COMPOUNDS (TCLP)											
1,1-Dichloroethene	-	-	µg/l	28 U	28 U	28 U	28 U	28 U	28 U	28 U	28 U
1,2-Dichloroethane	-	-	µg/l	30 U	30 U	30 U	30 U	30 U	30 U	30 U	30 U
1,4-Dichlorobenzene	-	-	µg/l	37 U	37 U	37 U	37 U	37 U	37 U	37 U	37 U
Benzene	-	-	µg/l	27 U	27 U	27 U	27 U	27 U	27 U	27 U	27 U
Carbon Tetrachloride	-	-	µg/l	34 U	34 U	34 U	34 U	34 U	34 U	34 U	34 U
Chlorobenzene	-	-	µg/l	24 U	24 U	24 U	24 U	24 U	24 U	24 U	24 U
Chloroform	-	-	µg/l	40 U	40 U	40 U	40 U	40 U	40 U	40 U	40 U
Methyl Ethyl Ketone (2-Butanone)	-	-	µg/l	300 UJ	300 UJ	300 UJ	300 UJ	300 UJ	300 UJ	300 UJ	300 UJ
Tetrachloroethylene (PCE)	-	-	µg/l	21 U	21 U	21 U	21 U	21 U	21 U	21 U	21 U
Trichloroethylene (TCE)	-	-	µg/l	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
Vinyl Chloride	-	-	µg/l	45 U	45 U	45 U	45 U	45 U	45 U	45 U	45 U

Notes:
SCOs = Soil Cleanup Objectives
VOCs = Volatile organic compounds
µg/l = microgram per liter
mg/kg = milligram per kilogram
U = Indicates the anlayte was analyzed for but not detected.
J = Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value.
NS = Not sampled
NA = Not analyzed
Bold = Indicates exceedance above the Unrestricted Use Soil Cleanup Objective per 6 NYCRR Part 375 effective December 14, 2006
Shaded = Indicates exceedance above the Unrestricted Industrial Use Soil Cleanup Objectives per 6 NYCRR Part 375 efffective December 14, 2006.
Debris Pile locations shown on Figure 1-2 of the IRM FFS Work Plan.

TABLE 3-5
DEBRIS PILE COMPOSITE SAMPLE RESULTS

UNIVERSAL WASTE
UTICA, NY

Chemical Name	NYSDEC SCOs - Protection of Public Health - Industrial (mg/kg)	NYSDEC SCOs - Unrestricted Use (mg/kg)	UNITS	DP-09	DP-10	DP-11	DP-12	DP-13	DP-14	DP-15	DP-16	DP-17
				6/4/2015	6/4/2015	6/4/2015	6/4/2015	6/4/2015	6/4/2015	6/4/2015	6/4/2015	6/4/2015
GENERAL CHEMISTRY												
Corrosivity	-	-	none	8	8.1	7.8	8	7.9	8	8.1	7.9	7.9
Cyanide	10,000	27	mg/kg	0.13 U	0.13 U	0.13 U	0.13 U	0.14 U	0.13 UJ	0.23	0.59	0.71
Ignitability	-	-	Deg_F	230 >	230 >	230 >	230 >	230 >	230 >	230 >	230 >	230 >
Reactivity	-	-	mg/kg	1.7 U	1.6 U	1.7 U	1.8 U	1.8 U	1.7 U	1.7 U	2 U	2 U
Solids, Percent	-	-	%	85.3	91.3	88	84.4	85.2	90.2	87.9	74	76.1
Sulfide Reactive	-	-	mg/kg	58 U	54 U	57 U	59 U	59 U	55 U	57 U	67 U	65 U
HERBICIDES (SW846 8151)												
2,4 Db	-	-	mg/kg	0.013 U	0.012 U	0.012 U	0.013 U	0.012 U	0.012 U	0.012 U	0.014 U	0.014 U
2,4,5-T (Trichlorophenoxyacetic Acid)	-	-	mg/kg	0.0052 UJ	0.0047 UJ	0.0049 UJ	0.0051 UJ	0.0051 UJ	0.0048 UJ	0.0049 UJ	0.0058 UJ	0.0058 UJ
2,4-D (Dichlorophenoxyacetic Acid)	-	-	mg/kg	0.004 U	0.0036 U	0.0038 U	0.0039 U	0.0039 U	0.0037 U	0.0038 U	0.0045 UJ	0.0045 UJ
Dalapon	-	-	mg/kg	0.012 U	0.011 U	0.012 U	0.012 U	0.012 U	0.012 U	0.012 U	0.014 U	0.014 U
Dicamba	-	-	mg/kg	0.0071 U	0.0065 U	0.0068 U	0.0071 U	0.007 U	0.0066 U	0.0068 U	0.0081 U	0.008 U
Dichloroprop	-	-	mg/kg	0.0058 U	0.0053 U	0.0056 U	0.0058 U	0.0057 U	0.0054 U	0.0056 U	0.0066 U	0.0066 U
Dinoseb	-	-	mg/kg	0.011 U	0.01 U	0.011 U	0.011 U	0.011 U	0.01 U	0.011 U	0.013 U	0.012 U
MCPA	-	-	mg/kg	1.3 U	1.2 U	1.3 U	1.3 U	1.3 U	1.2 U	1.3 U	1.5 U	1.5 U
MCPP	-	-	mg/kg	0.64 U	0.58 U	0.61 U	0.63 U	0.62 U	0.59 U	0.61 U	0.72 U	0.71 U
Pentachlorophenol	55	0.8	mg/kg	0.0116 J	0.0339 J	0.0362	0.0125 J	0.0069 J	0.0049 U	0.0055 J	0.057 J	0.0167 J
Silvex (2,4,5-TP)	1,000	3.8	mg/kg	0.0046 U	0.0042 U	0.0044 U	0.0045 U	0.0045 U	0.0042 U	0.0044 U	0.0052 U	0.0051 U
METALS												
Aluminum	-	-	mg/kg	7,360	8,750	11,000	8,230	8,890	8,280	10,200	8,990	8,610
Antimony	-	-	mg/kg	9.9 J	29.7 J	48.7 J	46.9 J	27.6 J	11.4 J	17.2 J	2.4 J	3.7 J
Arsenic	16	13	mg/kg	**33.6**	**17.9**	**19.3**	**28**	**19.6**	**16.1**	**17.5**	**13.8**	**28.2**
Barium	10,000	350	mg/kg	**634**	**357** J	433	292	157	171	114	258	**561**
Beryllium	2,700	7.2	mg/kg	3.7 U	7 U	3.7 U	3.7 U	3.7 U	3.6 U	7.2 U	0.81 U	2.1 U
Cadmium	60	2.5	mg/kg	**21.2**	**12.9**	**16.7**	**19.4**	**4.3**	**5.3**	**7.4**	**4**	**4.2**
Calcium	-	-	mg/kg	23,300	83,000	70,800	66,300	60,100	41,100	47,600	10,300	10,400
Chromium, Total	-	-	mg/kg	156	4,720	3,650	11,100	7,600	3,140	7,660	134	74.3
Cobalt	-	-	mg/kg	51.1	1,930	353	437	2,630	2,760	963	73.9	29
Copper	10,000	50	mg/kg	**915**	**993**	**4,430**	**3,870**	**6,130**	**1,140**	**18,200**	**221**	**341**
Iron	-	-	mg/kg	184,000	100,000	138,000	145,000	142,000	75,800	80,000	40,400	50,000
Lead	3,900	63	mg/kg	**1,320**	**1,480**	**1,060**	**954**	**534**	**680**	**353**	**521**	**841**
Magnesium	-	-	mg/kg	4,070	10,200	6,800	9,550	5,890	4,620	7,570	2,850	2,370
Manganese	10,000	1,600	mg/kg	1,560	910 J	1,200	**2,200**	1,170	783	**1,750**	763	687
Mercury	5.7	0.18	mg/kg	**2.3**	**2**	**3.1**	**3.7**	**1.7**	**0.71**	**0.83**	**0.78**	**1.1**
Nickel	10,000	30	mg/kg	**368**	**15,100**	**6,290**	**10,800**	**22,300**	**12,000**	**58,000**	**401**	**121**
Potassium	-	-	mg/kg	2,300 U	748	794	836	780	1,190	1,280	1,060	1,400
Selenium	6,800	3.9	mg/kg	4.6 U	4.3 U	4.6 U	4.7 U	4.6 U	4.5 U	4.5 U	1 U	1.1 U
Silver	6,800	2	mg/kg	2.3 U	**15** J	**24.6**	**7.2**	2.3 U	0.45 U	**3**	**1.2**	**1.1**
Sodium	-	-	mg/kg	2,300 U	430 U	460 U	470 U	460 U	450 U	450 U	510 U	530 U
Thallium	-	-	mg/kg	4.6 U	4.3 U	4.6 U	4.7 U	5.6	6.4	4.5 U	1 U	1.1 U
Vanadium	-	-	mg/kg	20.7	64.8 J	54.1	101	48.4	31.5	62.2	24.9	59.7
Zinc	10,000	109	mg/kg	**4,480**	**5,410**	**3,840**	**3,280**	**1,290**	**962**	**883**	**1,550**	**930**

TABLE 3-5
DEBRIS PILE COMPOSITE SAMPLE RESULTS

UNIVERSAL WASTE
UTICA, NY

Chemical Name	NYSDEC SCOs - Protection of Public Health - Industrial (mg/kg)	NYSDEC SCOs - Unrestricted Use (mg/kg)	UNITS	DP-09	DP-10	DP-11	DP-12	DP-13	DP-14	DP-15	DP-16	DP-17
				6/4/2015	6/4/2015	6/4/2015	6/4/2015	6/4/2015	6/4/2015	6/4/2015	6/4/2015	6/4/2015
METALS (TCLP)												
Arsenic	-	-	µg/l	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Barium	-	-	µg/l	1,700	2,000	1,700	1,800	1,300	940	1,300	1,400	2,200
Cadmium	-	-	µg/l	130	73	84	93	37	36	65	22	20
Chromium, Total	-	-	µg/l	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Lead	-	-	µg/l	220	230	85	320	74	68	10 U	240	370
Mercury	-	-	µg/l	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Selenium	-	-	µg/l	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
Silver	-	-	µg/l	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
PESTICIDES (SW846 8081B)												
Aldrin	1.4	0.005	mg/kg	0.0014 UJ	0.0014 UJ	0.0015 UJ	0.0015 UJ	0.0014 UJ	0.0014 UJ	0.0014 UJ	0.0016 UJ	0.0016 UJ
Alpha Bhc (Alpha Hexachlorocyclohexane)	6.8	0.02	mg/kg	0.0019 UJ	0.0018 UJ	0.0019 UJ	0.002 UJ	0.0019 UJ	0.0019 UJ	0.0018 UJ	0.0022 UJ	0.0022 UJ
Alpha Endosulfan	920	2.4	mg/kg	0.002 UJ	0.0019 U	0.002 U	0.0021 U	0.002 U	0.0019 U	0.0019 U	0.0023 U	0.0022 U
Beta Bhc (Beta Hexachlorocyclohexane)	14	0.036	mg/kg	0.0019 UJ	0.0018 UJ	0.0019 UJ	0.002 UJ	0.0019 UJ	0.0018 UJ	0.0018 UJ	0.0021 UJ	0.0021 UJ
Beta Endosulfan	920	2.4	mg/kg	0.0017 U	0.0017 U	0.0018 U	0.0018 U	0.0018 U	0.0017 U	0.0017 U	0.002 U	0.002 U
cis-Chlordane	47	0.094	mg/kg	0.0028 UJ	0.0027 U	0.0028 U	0.0029 U	0.0028 U	0.0027 U	0.0027 U	0.0032 U	0.0032 U
Delta BHC (Delta Hexachlorocyclohexane)	1,000	0.04	mg/kg	0.0018 UJ	0.0018 UJ	0.0019 UJ	0.0019 UJ	0.0018 UJ	0.0018 UJ	0.0018 UJ	0.0021 UJ	0.0021 UJ
Dieldrin	2.8	0.005	mg/kg	0.0017 UR	0.0016 U	0.0017 U	0.0018 U	0.0017 U	0.0017 U	0.0016 U	0.0019 U	0.0019 U
Endosulfan Sulfate	920	2.4	mg/kg	0.0018 U	0.0018 U	0.0018 U	0.0019 U	0.0018 U	0.0018 U	0.0018 U	0.0021 U	0.0021 U
Endrin	410	0.014	mg/kg	0.0023 UJ	0.0023 UJ	0.0024 UJ	0.0025 UJ	0.0024 UJ	0.0023 UJ	0.0023 UJ	0.0027 UJ	0.0026 UJ
Endrin Aldehyde	-	-	mg/kg	0.0018 U	0.0018 U	0.0019 U	0.0019 U	0.0018 U	0.0018 U	0.0018 U	0.0021 U	0.0021 U
Endrin Ketone	-	-	mg/kg	0.0019 U	0.0019 U	0.002 U	0.0021 U	0.002 U	0.0019 U	0.0019 U	0.0023 U	0.0022 U
Gamma Bhc (Lindane)	23	0.1	mg/kg	0.0016 UJ	0.0016 UJ	0.0017 UJ	0.0017 UJ	0.0016 UJ	0.0016 UJ	0.0016 UJ	0.0019 UJ	0.0019 UJ
Heptachlor	29	0.042	mg/kg	0.002 U	0.002 U	0.0021 U	0.0022 U	0.0021 U	0.002 U	0.002 U	0.0024 U	0.0023 U
Heptachlor Epoxide	-	-	mg/kg	0.0017 UR	0.0017 U	0.0018 U	0.0018 U	0.0017 U	0.0017 U	0.0017 U	0.002 U	0.002 U
Methoxychlor	-	-	mg/kg	0.0032 UJ	0.0032 UJ	0.0033 UJ	0.0034 UJ	0.0033 UJ	0.0032 UJ	0.0032 UJ	0.0037 UJ	0.0037 UJ
P,P'-DDD	180	0.0033	mg/kg	0.0019 UJ	0.0018 UJ	0.0019 UJ	0.002 UJ	0.0019 UJ	0.0019 UJ	0.0018 UJ	0.0022 UJ	0.0022 UJ
P,P'-DDE	120	0.0033	mg/kg	0.0014 U	0.0014 U	0.0015 U	0.0015 U	0.0014 U	0.0014 U	0.0014 U	0.0016 U	0.0016 U
P,P'-DDT	94	0.0033	mg/kg	0.0019 UR	0.0019 UJ	0.002 UJ	0.002 UJ	0.0019 UJ	0.0019 UJ	0.0019 UJ	0.0022 UJ	0.0022 UJ
Toxaphene	-	-	mg/kg	0.024 U	0.023 U	0.024 U	0.025 U	0.024 U	0.023 U	0.023 U	0.027 U	0.027 U
trans-Chlordane	-	-	mg/kg	0.0022 UJ	0.0022 UJ	0.0023 UJ	0.0024 UJ	0.0023 UJ	0.0022 UJ	0.0022 UJ	0.0026 UJ	0.0025 UJ
PETROLEUM HYDROCARBONS												
Gasoline C4-C12	-	-	mg/kg	1.96 J	1.38 J	3.38 J	2.43 J	5.66 J	1.3 J	1.81 J	3.28 J	3.42 J
Total Petroleum Hydrocarbons Range C9 Through C36	-	-	mg/kg	412	716	789	673	740	348	405	163	148
POLYCHLORINATED BIPHENYLS (SW846 8082)												
PCB-1016 (Aroclor 1016)	25	0.1	mg/kg	0.0011 U	0.001 U	0.001 U	0.0011 U	0.0011 U	0.001 U	0.001 U	0.0013 U	0.0012 U
PCB-1221 (Aroclor 1221)	25	0.1	mg/kg	0.001 U	0.0009 U	0.0009 U	0.001 U	0.001 U	0.0009 U	0.0009 U	0.0011 U	0.0011 U
PCB-1232 (Aroclor 1232)	25	0.1	mg/kg	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0011 U	0.0013 U	0.0013 U
PCB-1242 (Aroclor 1242)	25	0.1	mg/kg	0.0012 U	0.0011 U	0.0011 U	0.0012 U	0.0012 U	0.0011 U	0.0011 U	0.0014 U	0.0013 U
PCB-1248 (Aroclor 1248)	25	0.1	mg/kg	0.0013 U	0.0013 U	0.0013 U	0.0014 U	0.0014 U	0.0013 U	**60.40** J	0.0016 U	0.0015 U
PCB-1254 (Aroclor 1254)	25	0.1	mg/kg	**32.40** J	**25.20** J	**43.80** J	**19.30** J	**8.74** J	**6.51** J	**37.70** J	**3.02** J	**0.45** J
PCB-1260 (Aroclor 1260)	25	0.1	mg/kg	**5.74** J	**2.59** J	**4.70** J	**2.72** J	**1.87** J	**0.92** J	**6.17** J	**0.90** J	**0.17** J
Total Aroclors	25	0.1	mg/kg	**38.14**	**27.79**	**48.50**	**22.02**	**10.61**	**7.43**	**104.27**	**3.92**	**0.62**

TABLE 3-5
DEBRIS PILE COMPOSITE SAMPLE RESULTS

UNIVERSAL WASTE
UTICA, NY

Chemical Name	NYSDEC SCOs - Protection of Public Health - Industrial (mg/kg)	NYSDEC SCOs - Unrestricted Use (mg/kg)	UNITS	DP-09	DP-10	DP-11	DP-12	DP-13	DP-14	DP-15	DP-16	DP-17
				6/4/2015	6/4/2015	6/4/2015	6/4/2015	6/4/2015	6/4/2015	6/4/2015	6/4/2015	6/4/2015
SEMIVOLATILE ORGANIC COMPOUNDS (SW846 8270D)												
2,4,5-Trichlorophenol	-	-	mg/kg	0.014 U	0.014 U	0.014 U	0.014 U	0.014 U	0.014 U	0.014 U	0.017 U	0.016 U
2,4,6-Trichlorophenol	-	-	mg/kg	0.014 U	0.013 U	0.013 U	0.014 U	0.014 U	0.013 U	0.014 U	0.017 U	0.016 U
2,4-Dichlorophenol	-	-	mg/kg	0.017 U	0.016 U	0.016 U	0.017 U	0.016 U	0.016 U	0.016 U	0.019 U	0.018 U
2,4-Dimethylphenol	-	-	mg/kg	0.126 J	0.088 U	0.088 U	0.093 U	0.091 U	0.089 U	0.09 U	0.11 U	0.1 U
2,4-Dinitrophenol	-	-	mg/kg	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.17 U	0.16 U
2,4-Dinitrotoluene	-	-	mg/kg	0.038 U	0.036 U	0.036 U	0.038 U	0.037 U	0.037 U	0.037 U	0.045 U	0.043 U
2,6-Dinitrotoluene	-	-	mg/kg	0.014 U	0.014 U	0.014 U	0.014 U	0.014 U	0.014 U	0.014 U	0.017 U	0.016 U
2-Chloronaphthalene	-	-	mg/kg	0.016 U	0.015 U	0.015 U	0.016 U	0.015 U	0.015 U	0.015 U	0.018 U	0.017 U
2-Chlorophenol	-	-	mg/kg	0.013 U	0.012 U	0.012 U	0.013 U	0.013 U	0.012 U	0.012 U	0.015 U	0.014 U
2-Methylnaphthalene	-	-	mg/kg	0.0588 J	0.0153 J	0.0329 J	0.0305 J	0.0186 J	0.014 U	0.0163 J	0.017 U	0.0181 J
2-Methylphenol (O-Cresol)	1,000	0.33	mg/kg	0.207 J	0.021 U	0.022 U	0.023 U	0.022 U	0.022 U	0.022 U	0.027 U	0.025 U
2-Nitroaniline	-	-	mg/kg	0.014 U	0.014 U	0.014 U	0.014 U	0.014 U	0.014 U	0.014 U	0.017 U	0.016 U
2-Nitrophenol	-	-	mg/kg	0.015 U	0.014 U	0.014 U	0.015 U	0.015 U	0.015 U	0.015 U	0.018 U	0.017 U
3,3'-Dichlorobenzidine	-	-	mg/kg	0.029 U	0.027 U	0.027 U	0.029 U	0.028 U	0.027 U	0.028 U	0.034 U	0.032 U
3-Nitroaniline	-	-	mg/kg	0.031 U	0.03 U	0.03 U	0.031 U	0.031 U	0.03 U	0.03 U	0.037 U	0.035 U
4,6-Dinitro-2-Methylphenol	-	-	mg/kg	0.072 U	0.068 U	0.068 U	0.072 U	0.07 U	0.068 U	0.069 U	0.084 U	0.08 U
4-Bromophenyl Phenyl Ether	-	-	mg/kg	0.014 U	0.014 U	0.014 U	0.014 U	0.014 U	0.014 U	0.014 U	0.017 U	0.016 U
4-Chloro-3-Methylphenol	-	-	mg/kg	0.015 U	0.014 U	0.014 U	0.015 U	0.014 U	0.014 U	0.014 U	0.017 U	0.016 U
4-Chloroaniline	-	-	mg/kg	0.014 U	0.014 U	0.014 U	0.014 U	0.014 U	0.014 U	0.014 U	0.017 U	0.016 U
4-Chlorophenyl Phenyl Ether	-	-	mg/kg	0.018 U	0.017 U	0.017 U	0.018 U	0.017 U	0.017 U	0.017 U	0.021 U	0.02 U
4-Methylphenol (P-Cresol)	1,000	0.33	mg/kg	0.308 J	0.026 U	0.026 U	0.028 U	0.027 U	0.027 U	0.027 U	0.033 U	0.031 U
4-Nitroaniline	-	-	mg/kg	0.014 U	0.014 U	0.014 U	0.014 U	0.014 U	0.014 U	0.014 U	0.017 U	0.016 U
4-Nitrophenol	-	-	mg/kg	0.11 U	0.1 U	0.1 U	0.11 U	0.11 U	0.1 U	0.1 U	0.13 U	0.12 U
Acenaphthene	1,000	20	mg/kg	0.087 J	0.027 J	0.0443 J	0.0557 J	0.0514 J	0.0463 J	0.0336 J	0.0355 J	0.0868 J
Acenaphthylene	1,000	100	mg/kg	0.351	0.138	0.244	0.263	0.555	0.45	0.219	0.137	0.113 J
Acetophenone	-	-	mg/kg	0.013 U	0.0302 J	0.0641 J	0.0412 J	0.0674 J	0.0174 J	0.0477 J	0.0282 J	0.014 U
Anthracene	1,000	100	mg/kg	0.491	0.152	0.324	0.372	0.499	0.446	0.218	0.17	0.456
Atrazine	-	-	mg/kg	0.029 U	0.027 U	0.027 U	0.029 U	0.028 U	0.027 U	0.028 U	0.034 U	0.032 U
Benzaldehyde	-	-	mg/kg	0.0918 J	0.054 U	0.0778 J	0.057 U	0.056 U	0.055 U	0.055 U	0.067 U	0.064 U
Benzo(A)Anthracene	11	1	mg/kg	**1.54**	0.416	0.69	0.97	**1.05**	**1.2**	0.571	0.687	**1.1**
Benzo(A)Pyrene	1.1	1	mg/kg	**1.67**	0.475	0.757	**1.19**	**1.38**	**1.3**	0.665	0.735	**1.05**
Benzo(B)Fluoranthene	11	1	mg/kg	**1.54**	0.528	0.958	**1.9**	**1.3**	**1.25**	0.688	0.673	0.974
Benzo(G,H,I)Perylene	1,000	100	mg/kg	1.04	0.413	0.631	1.11	1.18	0.796	0.518	0.426	0.553
Benzo(K)Fluoranthene	110	0.8	mg/kg	**1.26**	0.431	0.756	**1.37**	**1.14**	**1.19**	0.593	0.636	**0.894**
Benzyl Butyl Phthalate	-	-	mg/kg	6.33	0.942	0.558	0.661	0.213 J	0.145 J	0.322	0.0705 J	0.0653 J
Biphenyl (Diphenyl)	-	-	mg/kg	0.014 U	0.014 U	0.0169 J	0.014 U	0.014 U	0.014 U	0.014 U	0.017 U	0.016 U
Bis(2-Chloroethoxy) Methane	-	-	mg/kg	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U	0.013 U	0.016 U	0.015 U
Bis(2-Chloroethyl) Ether (2-Chloroethyl Ether)	-	-	mg/kg	0.017 U	0.016 U	0.017 U	0.017 U	0.017 U	0.017 U	0.017 U	0.02 U	0.019 U
Bis(2-Chloroisopropyl) Ether	-	-	mg/kg	0.021 U	0.019 U	0.019 U	0.021 U	0.02 U	0.02 U	0.02 U	0.024 U	0.023 U
Bis(2-Ethylhexyl) Phthalate	-	-	mg/kg	1.4	0.336	1.26	8.94	0.362	0.315	1.21	0.325 J	0.825
Caprolactam	-	-	mg/kg	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.17 U	0.16 U

TABLE 3-5
DEBRIS PILE COMPOSITE SAMPLE RESULTS

UNIVERSAL WASTE
UTICA, NY

Chemical Name	NYSDEC SCOs - Protection of Public Health - Industrial (mg/kg)	NYSDEC SCOs - Unrestricted Use (mg/kg)	UNITS	DP-09	DP-10	DP-11	DP-12	DP-13	DP-14	DP-15	DP-16	DP-17
				6/4/2015	6/4/2015	6/4/2015	6/4/2015	6/4/2015	6/4/2015	6/4/2015	6/4/2015	6/4/2015
Carbazole	-	-	mg/kg	0.169	0.0527 J	0.0952 J	0.129	0.0927 J	0.103 J	0.0653 J	0.0636 J	0.16
Chrysene	110	1	mg/kg	**1.67**	0.479	0.788	**1.67**	**1.07**	**1.26**	0.627	0.697	**1.08**
Dibenz(A,H)Anthracene	1.1	0.33	mg/kg	**0.34**	0.128	0.179	0.294	0.307	0.276	0.14	0.139	0.238
Dibenzofuran	1,000	7	mg/kg	0.044 J	0.0154 J	0.04 J	0.0385 J	0.0309 J	0.026 J	0.0234 J	0.0211 J	0.0632 J
Diethyl Phthalate	-	-	mg/kg	0.014 U	0.013 U	0.014 U	0.014 U	0.014 U	0.014 U	0.014 U	0.017 U	0.016 U
Dimethyl Phthalate	-	-	mg/kg	0.0245 J	0.018 J	0.0223 J	0.0848 J	0.0403 J	0.016 U	0.0426 J	0.019 U	0.018 U
Di-N-Butyl Phthalate	-	-	mg/kg	0.774	0.126 J	0.179 J	0.276 J	0.0854 J	0.52	0.139 J	0.0701 J	0.0796 J
Di-N-Octylphthalate	-	-	mg/kg	0.009 U	0.0084 U	0.0085 U	0.0089 U	0.0088 U	0.0085 U	0.0086 U	0.01 U	0.01 U
Fluoranthene	1,000	100	mg/kg	2.81	0.742	1.28	2.12	1.84	2.41	1.1	1.05	2.22
Fluorene	1,000	30	mg/kg	0.0929 J	0.0294 J	0.0585 J	0.0553 J	0.0712 J	0.0662 J	0.0427 J	0.0292 J	0.103 J
Hexachlorobenzene	12	0.33	mg/kg	0.018 U	0.017 U	0.017 U	0.018 U	0.018 U	0.017 U	0.017 U	0.021 U	0.02 U
Hexachlorobutadiene	-	-	mg/kg	0.017 U	0.016 U	0.016 U	0.017 U	0.016 U	0.016 U	0.016 U	0.019 U	0.018 U
Hexachlorocyclopentadiene	-	-	mg/kg	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.17 U	0.16 U
Hexachloroethane	-	-	mg/kg	0.014 U	0.013 U	0.013 U	0.014 U	0.014 U	0.013 U	0.013 U	0.016 U	0.015 U
Indeno(1,2,3-C,D)Pyrene	11	0.5	mg/kg	**0.888**	0.362	**0.556**	**0.981**	**0.971**	**0.738**	0.442	0.401	**0.558**
Isophorone	-	-	mg/kg	0.013 U	0.012 U	0.012 U	0.013 U	0.013 U	0.013 U	0.013 U	0.015 U	0.015 U
Naphthalene	1,000	12	mg/kg	0.0721 J	0.017 U	0.0576 J	0.0299 J	0.0211 J	0.018 U	0.018 U	0.022 U	0.02 U
Nitrobenzene	-	-	mg/kg	0.016 U	0.015 U	0.015 U	0.015 U	0.015 U	0.015 U	0.015 U	0.018 U	0.017 U
N-Nitrosodi-N-Propylamine	-	-	mg/kg	0.016 U	0.015 U	0.016 U	0.016 U	0.016 U	0.016 U	0.016 U	0.019 U	0.018 U
N-Nitrosodiphenylamine	-	-	mg/kg	0.017 U	0.016 U	0.016 U	0.017 U	0.017 U	0.017 U	0.017 U	0.02 U	0.019 U
Pentachlorophenol	55	0.8	mg/kg	0.04 U	0.038 U	0.038 U	0.04 U	0.039 U	0.038 U	0.039 U	0.047 U	0.045 U
Phenanthrene	1,000	100	mg/kg	1.29	0.314	0.693	0.693	0.767	0.917	0.481	0.456	1.33
Phenol	1,000	0.33	mg/kg	0.016 U	0.015 U	0.015 U	0.016 U	0.016 U	0.016 U	0.016 U	0.019 U	0.018 U
Pyrene	1,000	100	mg/kg	2.49	0.629	1.08	1.83	1.53	1.94	0.887	0.913	1.69
SEMIVOLATILE ORGANIC COMPOUNDS (TCLP)												
1,4-Dichlorobenzene	-	-	µg/l	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U
2,4,5-Trichlorophenol	-	-	µg/l	4.5 U	4.5 U	4.5 U	4.5 U	4.5 U	4.5 U	4.5 U	4.5 U	4.5 U
2,4,6-Trichlorophenol	-	-	µg/l	4.5 U	4.5 U	4.5 U	4.5 U	4.5 U	4.5 U	4.5 U	4.5 U	4.5 U
2,4-Dinitrotoluene	-	-	µg/l	3.7 U	3.7 U	3.7 U	3.7 U	3.7 U	3.7 U	3.7 U	3.7 U	3.7 U
2-Methylphenol (O-Cresol)	-	-	µg/l	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U
4-Methylphenol (P-Cresol)	-	-	µg/l	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U	4.4 U
Hexachlorobenzene	-	-	µg/l	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U
Hexachlorobutadiene	-	-	µg/l	2.9 U	2.9 U	2.9 U	2.9 U	2.9 U	2.9 U	2.9 U	2.9 U	2.9 U
Hexachloroethane	-	-	µg/l	2.8 U	2.8 U	2.8 U	2.8 U	2.8 U	2.8 U	2.8 U	2.8 U	2.8 U
Nitrobenzene	-	-	µg/l	4.8 U	4.8 U	4.8 U	4.8 U	4.8 U	4.8 U	4.8 U	4.8 U	4.8 U
Pentachlorophenol	-	-	µg/l	3.5 U	3.5 U	3.5 U	3.5 U	3.5 U	3.5 U	3.5 U	3.5 U	3.5 U
Pyridine	-	-	µg/l	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U	3.6 U
TOTAL ORGANIC HALIDES												
Total Organic Halides (TOX)	-	-	mg/kg	58.3	22 U	24 U	26 U	25 U	24 U	25 U	29 U	30

TABLE 3-5
DEBRIS PILE COMPOSITE SAMPLE RESULTS

UNIVERSAL WASTE
UTICA, NY

Chemical Name	NYSDEC SCOs - Protection of Public Health - Industrial (mg/kg)	NYSDEC SCOs - Unrestricted Use (mg/kg)	UNITS	DP-09	DP-10	DP-11	DP-12	DP-13	DP-14	DP-15	DP-16	DP-17
				6/4/2015	6/4/2015	6/4/2015	6/4/2015	6/4/2015	6/4/2015	6/4/2015	6/4/2015	6/4/2015
VOLATILE ORGANIC COMPOUNDS (SW846 8260C)												
1,1,1-Trichloroethane	1,000	0.68	mg/kg	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.051 U	0.0004 U	0.0005 U	0.0005 U	0.06 U
1,1,2,2-Tetrachloroethane	-	-	mg/kg	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.03 U	0.0002 U	0.0003 U	0.0003 U	0.035 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	-	-	mg/kg	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.058 U	0.0005 U	0.0006 U	0.0005 U	0.068 U
1,1,2-Trichloroethane	-	-	mg/kg	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.063 U	0.0005 U	0.0006 U	0.0006 U	0.075 U
1,1-Dichloroethane	480	0.27	mg/kg	0.0004 U	0.0004 U	0.0005 U	0.0004 U	0.058 U	0.0005 U	0.0006 U	0.0005 U	0.069 U
1,1-Dichloroethene	1,000	0.33	mg/kg	0.0007 U	0.0007 U	0.0008 U	0.0007 U	0.1 U	0.0008 U	0.001 U	0.0009 U	0.12 U
1,2,4-Trichlorobenzene	-	-	mg/kg	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.065 U	0.0005 U	0.0006 U	0.0006 U	0.077 U
1,2-Dibromo-3-Chloropropane	-	-	mg/kg	0.0015 U	0.0016 U	0.0016 U	0.0016 U	0.22 U	0.0017 U	0.0021 U	0.002 U	0.26 U
1,2-Dibromoethane (Ethylene Dibromide)	-	-	mg/kg	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.043 U	0.0004 U	0.0004 U	0.0004 U	0.051 U
1,2-Dichlorobenzene	1,000	1.1	mg/kg	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.054 U	0.0004 U	0.0005 U	0.0005 U	0.063 U
1,2-Dichloroethane	60	0.02	mg/kg	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.054 U	0.0004 U	0.0005 U	0.0005 U	0.064 U
1,2-Dichloropropane	-	-	mg/kg	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.064 U	0.0005 U	0.0006 U	0.0006 U	0.076 U
1,3-Dichlorobenzene	560	2.4	mg/kg	0.0004 U	0.0004 U	0.0005 U	0.0004 U	0.058 U	0.0005 U	0.0006 U	0.0005 U	0.069 U
1,4-Dichlorobenzene	250	1.8	mg/kg	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.065 U	0.0005 U	0.0006 U	0.0006 U	0.077 U
2-Hexanone	-	-	mg/kg	0.0007 U	0.0007 U	0.0008 U	0.0007 U	0.099 U	0.0008 U	0.001 U	0.0009 U	0.12 U
Acetone	1,000	0.05	mg/kg	0.0034 U	**0.0989**	0.0037 U	0.0035 U	0.48 U	0.0039 U	0.0046 U	0.0045 U	0.57 U
Benzene	89	0.06	mg/kg	0.0018	0.0012	0.0009	0.001	0.055 U	0.002	0.0052	0.0039	0.065 U
Bromodichloromethane	-	-	mg/kg	0.0004 U	0.0005 U	0.0005 U	0.0005 U	0.063 U	0.0005 U	0.0006 U	0.0006 U	0.074 U
Bromoform	-	-	mg/kg	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.07 U	0.0006 U	0.0007 U	0.0007 U	0.083 U
Bromomethane	-	-	mg/kg	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.068 U	0.0014 J	0.0007 U	0.0006 U	0.081 U
Carbon Disulfide	-	-	mg/kg	0.0049 J	0.0015 J	0.0014 J	0.0017 J	0.06 U	0.0005 U	0.0014 J	0.0073	0.071 U
Carbon Tetrachloride	44	0.76	mg/kg	0.0004 U	0.0004 U	0.0005 U	0.0004 U	0.06 U	0.0005 U	0.0006 U	0.0006 U	0.071 U
Chlorobenzene	1,000	1.1	mg/kg	0.0002 U	0.0002 U	0.0003 U	0.0002 U	0.033 U	0.0003 U	0.0003 U	0.0003 U	0.039 U
Chloroethane	-	-	mg/kg	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.058 U	0.0005 U	0.0006 U	0.0005 U	0.068 U
Chloroform	700	0.37	mg/kg	0.0005 U	0.0005 U	0.0006 U	0.0005 U	0.074 U	0.0006 U	0.0007 U	0.0007 U	0.087 U
Chloromethane	-	-	mg/kg	0.0008 U	0.0008 U	0.0008 U	0.0008 U	0.11 U	0.0009 U	0.0011 U	0.001 U	0.13 U
Cis-1,2-Dichloroethylene	1,000	0.25	mg/kg	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.053 U	0.0004 U	0.0005 U	0.0005 U	0.063 U
Cis-1,3-Dichloropropene	-	-	mg/kg	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.055 U	0.0004 U	0.0005 U	0.0005 U	0.065 U
Cyclohexane	-	-	mg/kg	0.0004 U	0.0004 U	0.0004 U	0.0006 J	0.058 U	0.0005 U	0.0006 U	0.0005 U	0.068 U
Dibromochloromethane	-	-	mg/kg	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.037 U	0.0003 U	0.0004 U	0.0003 U	0.043 U
Dichlorodifluoromethane	-	-	mg/kg	0.0004 U	0.0004 U	0.0005 U	0.0004 U	0.059 U	0.0005 U	0.0006 U	0.0006 U	0.07 U
Ethylbenzene	780	1	mg/kg	0.0004 U	0.0004 U	0.0004 U	0.0005 J	0.056 U	0.0005 U	0.0007 J	0.0005 U	0.066 U
Isopropylbenzene (Cumene)	-	-	mg/kg	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.065 U	0.0005 U	0.0006 U	0.0006 U	0.077 U
Methyl Acetate	-	-	mg/kg	0.0009 U	0.0009 U	0.0009 U	0.0009 U	0.12 U	0.001 U	0.0011 U	0.0011 U	0.14 U
Methyl Ethyl Ketone (2-Butanone)	1,000	0.12	mg/kg	0.0035 U	0.0196	0.0038 U	0.0036 U	0.49 U	0.004 U	0.0047 U	0.0046 U	0.58 U
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	-	-	mg/kg	0.0007 U	0.0007 U	0.0007 U	0.0007 U	0.096 U	0.0008 U	0.0009 U	0.0009 U	0.11 U
Methylcyclohexane	-	-	mg/kg	0.0005 U	0.0006 U	0.0006 U	0.0006 U	0.076 U	0.0006 J	0.0007 U	0.0007 U	0.09 U
Methylene Chloride	1,000	0.05	mg/kg	0.0004 U	0.0005 U	0.0005 U	0.0004 U	0.061 U	0.0005 U	0.0006 U	0.0006 U	0.072 U
Styrene	-	-	mg/kg	0.0003 U	0.0003 U	0.0004 U	0.0008 J	1.77	0.0004 U	0.0004 U	0.0004 U	0.054 U
Tert-Butyl Methyl Ether	1,000	0.93	mg/kg	0.0007 U	0.0007 U	0.0007 U	0.0007 U	0.096 U	0.0008 U	0.0009 U	0.0009 U	0.11 U
Tetrachloroethylene (PCE)	300	1.3	mg/kg	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.043 U	0.0004 U	0.0004 U	0.0004 U	0.051 U

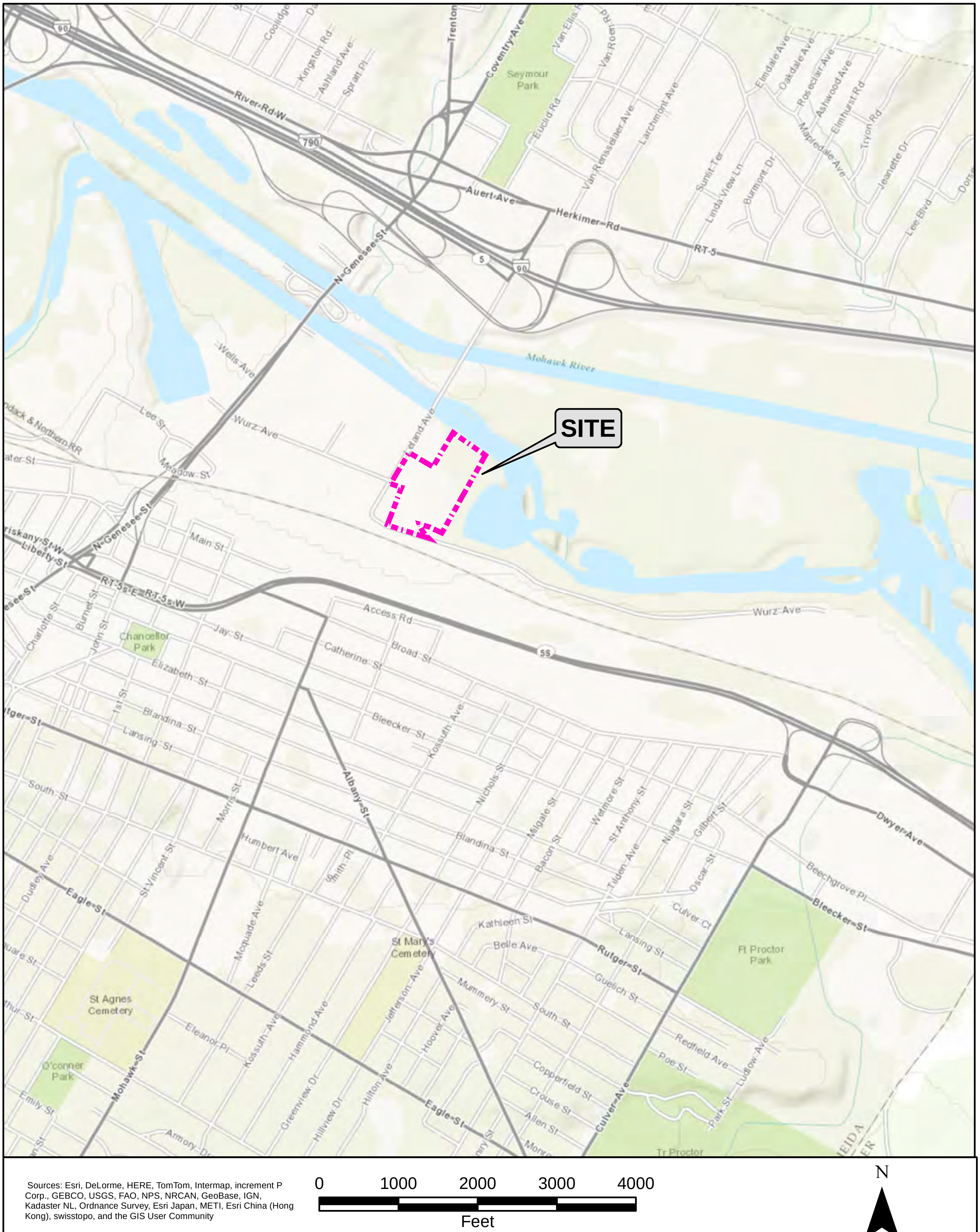
TABLE 3-5
DEBRIS PILE COMPOSITE SAMPLE RESULTS

UNIVERSAL WASTE
UTICA, NY

Chemical Name	NYSDEC SCOs - Protection of Public Health - Industrial (mg/kg)	NYSDEC SCOs - Unrestricted Use (mg/kg)	UNITS	DP-09 6/4/2015	DP-10 6/4/2015	DP-11 6/4/2015	DP-12 6/4/2015	DP-13 6/4/2015	DP-14 6/4/2015	DP-15 6/4/2015	DP-16 6/4/2015	DP-17 6/4/2015
Toluene	1,000	0.7	mg/kg	0.0013 J	0.0007 J	0.0005 J	0.0006 J	0.439 J	0.0007 J	0.0027 J	0.0015 J	0.069 U
Trans-1,2-Dichloroethene	1,000	0.19	mg/kg	0.0004 U	0.0004 U	0.0005 U	0.0004 U	0.059 U	0.0005 U	0.0006 U	0.0006 U	0.07 U
Trans-1,3-Dichloropropene	-	-	mg/kg	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.029 U	0.0002 U	0.0003 U	0.0003 U	0.034 U
Trichloroethylene (TCE)	400	0.47	mg/kg	0.0003 U	0.0003 U	0.0003 U	0.0003 U	0.045 U	0.0004 U	0.0064	0.0004 U	0.053 U
Trichlorofluoromethane	-	-	mg/kg	0.0003 U	0.0003 U	0.0004 U	0.0003 U	0.17 J	0.0004 U	0.0004 U	0.0004 U	0.054 U
Vinyl Chloride	27	0.02	mg/kg	0.0006 U	0.0006 U	0.0006 U	0.0006 U	0.08 U	0.0006 U	0.0008 U	0.0007 U	0.094 U
Xylenes	1,000	0.26	mg/kg	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0693 J	0.0004 U	0.0005 J	0.0005 U	0.06 U
VOLATILE ORGANIC COMPOUNDS (TCLP)												
1,1-Dichloroethene	-	-	µg/l	28 U	28 U	28 U	28 U	28 U	28 U	28 U	28 U	28 U
1,2-Dichloroethane	-	-	µg/l	30 U	30 U	30 U	30 U	30 U	30 U	30 U	30 U	30 U
1,4-Dichlorobenzene	-	-	µg/l	37 U	37 U	37 U	37 U	37 U	37 U	37 U	37 U	37 U
Benzene	-	-	µg/l	27 U	27 U	27 U	27 U	27 U	27 U	27 U	27 U	27 U
Carbon Tetrachloride	-	-	µg/l	34 U	34 U	34 U	34 U	34 U	34 U	34 U	34 U	34 U
Chlorobenzene	-	-	µg/l	24 U	24 U	24 U	24 U	24 U	24 U	24 U	24 U	24 U
Chloroform	-	-	µg/l	40 U	40 U	40 U	40 U	40 U	40 U	40 U	40 U	40 U
Methyl Ethyl Ketone (2-Butanone)	-	-	µg/l	300 UJ	300 UJ	300 UJ	300 UJ	300 UJ	300 UJ	300 UJ	300 UJ	300 UJ
Tetrachloroethylene (PCE)	-	-	µg/l	21 U	21 U	21 U	21 U	21 U	21 U	21 U	21 U	21 U
Trichloroethylene (TCE)	-	-	µg/l	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
Vinyl Chloride	-	-	µg/l	45 U	45 U	45 U	45 U	45 U	45 U	45 U	45 U	45 U

Notes:
SCOs = Soil Cleanup Objectives
VOCs = Volatile organic compounds
µg/l = microgram per liter
mg/kg = milligram per kilogram
U = Indicates the anlayte was analyzed for but not detected.
J = Result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value.
NS = Not sampled
NA = Not analyzed
Bold = Indicates exceedance above the Unrestricted Use Soil Cleanup Objective per 6 NYCRR Part 375 effective December 14, 2006
Shaded = Indicates exceedance above the Unrestricted Industrial Use Soil Cleanup Objectives per 6 NYCRR Part 375 efffective December 14, 2006.
Debris Pile locations shown on Figure 1-2 of the IRM FFS Work Plan.

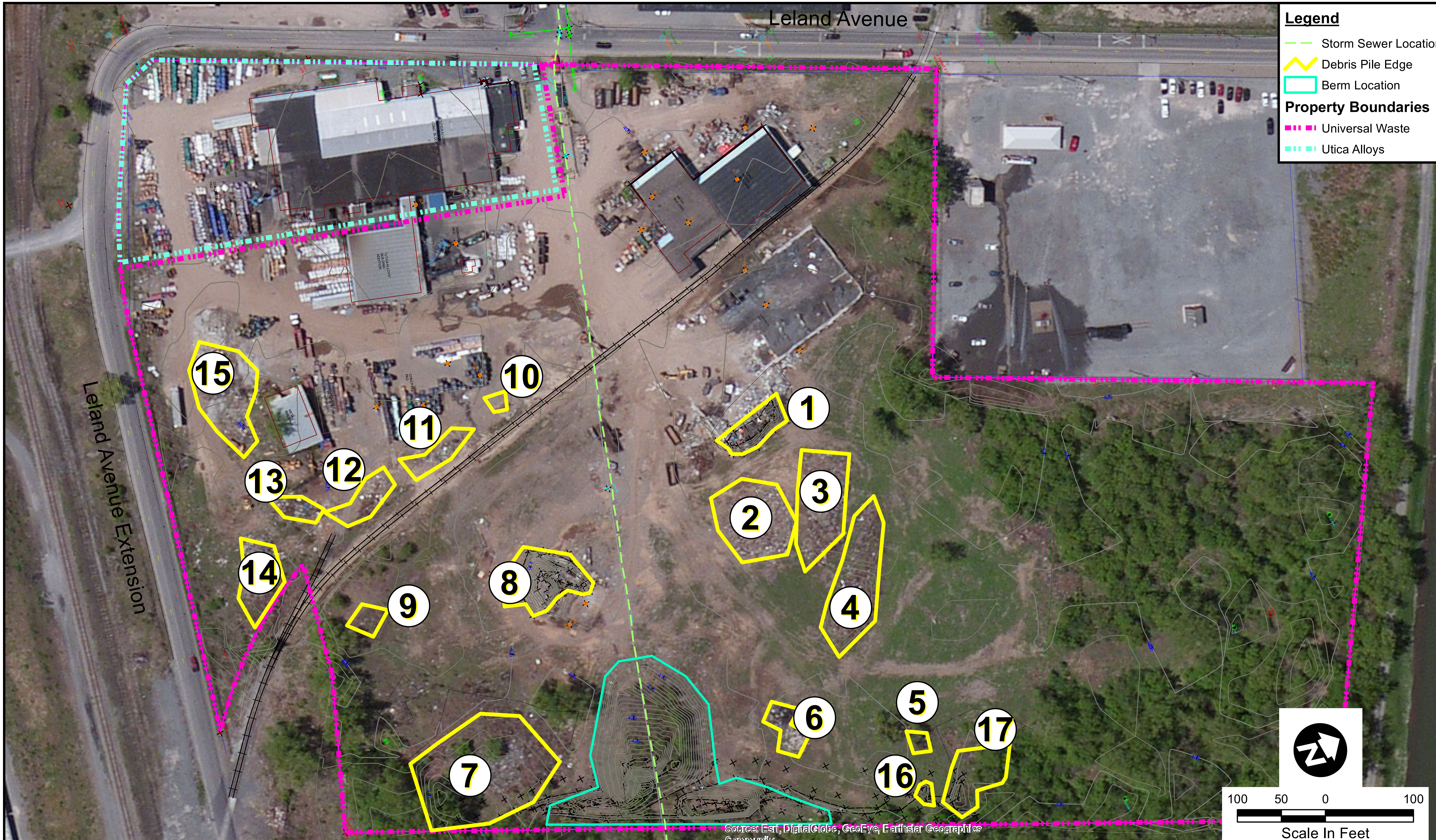
FIGURES



EHS Support consider it done

UNIVERSAL WASTE
UTICA, NEW YORK

FIGURE 1-1
SITE LOCATION



EHS Support
consider it done

UNIVERSAL WASTE
UTICA, NEW YORK

DEBRIS PILE AND BERM LOCATIONS

FIGURE 1-2

D:\EHSS_GIS\C00999_ELGUniversalWaste\01_Analysis\20151123_ReportFigures\Fig1-2_DebrisPileAndBermLocations.mxd

Printed 12/3/2015 9:58:28 AM by ASmith

EHS Support consider it done

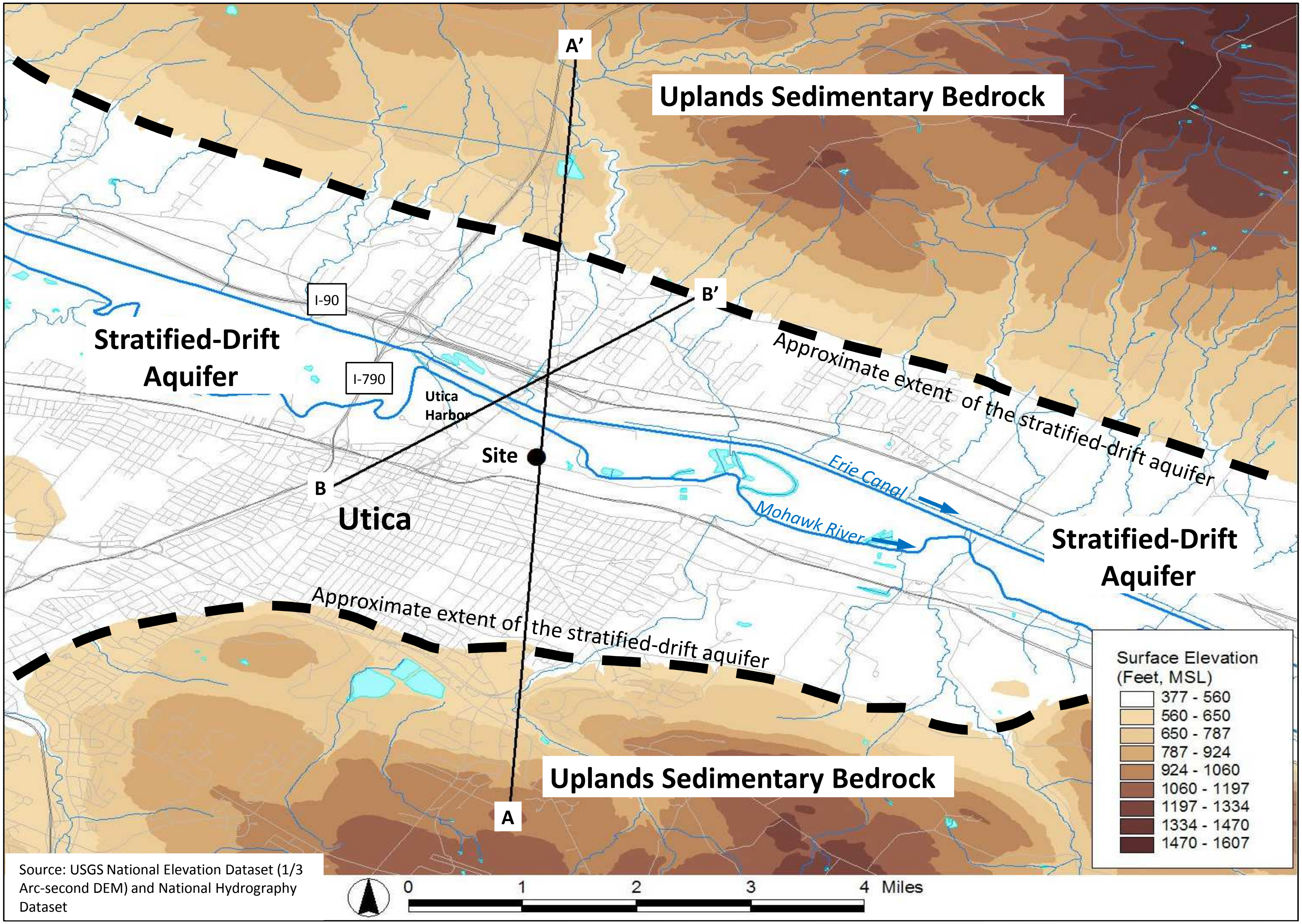
UNIVERSAL WASTE
UTICA, NEW YORK

SITE LAYOUT

FIGURE 2-1

D:\EHS_GIS\C00999_ELG\UniversalWaste\01_Analysis\20151123_ReportFigures\Universal - SiteLayout.mxd

Printed 1/11/2017 10:01:15 PM by ASmith



UNIVERSAL WASTE UTICA, NY EHS Support *August, 2011*	SITE LOCATION IN THE MOHAWK RIVER VALLEY OF THE APPALACHIAN PLATEAU PROVINCE	FIGURE 3-1

EHS Support
consider it done

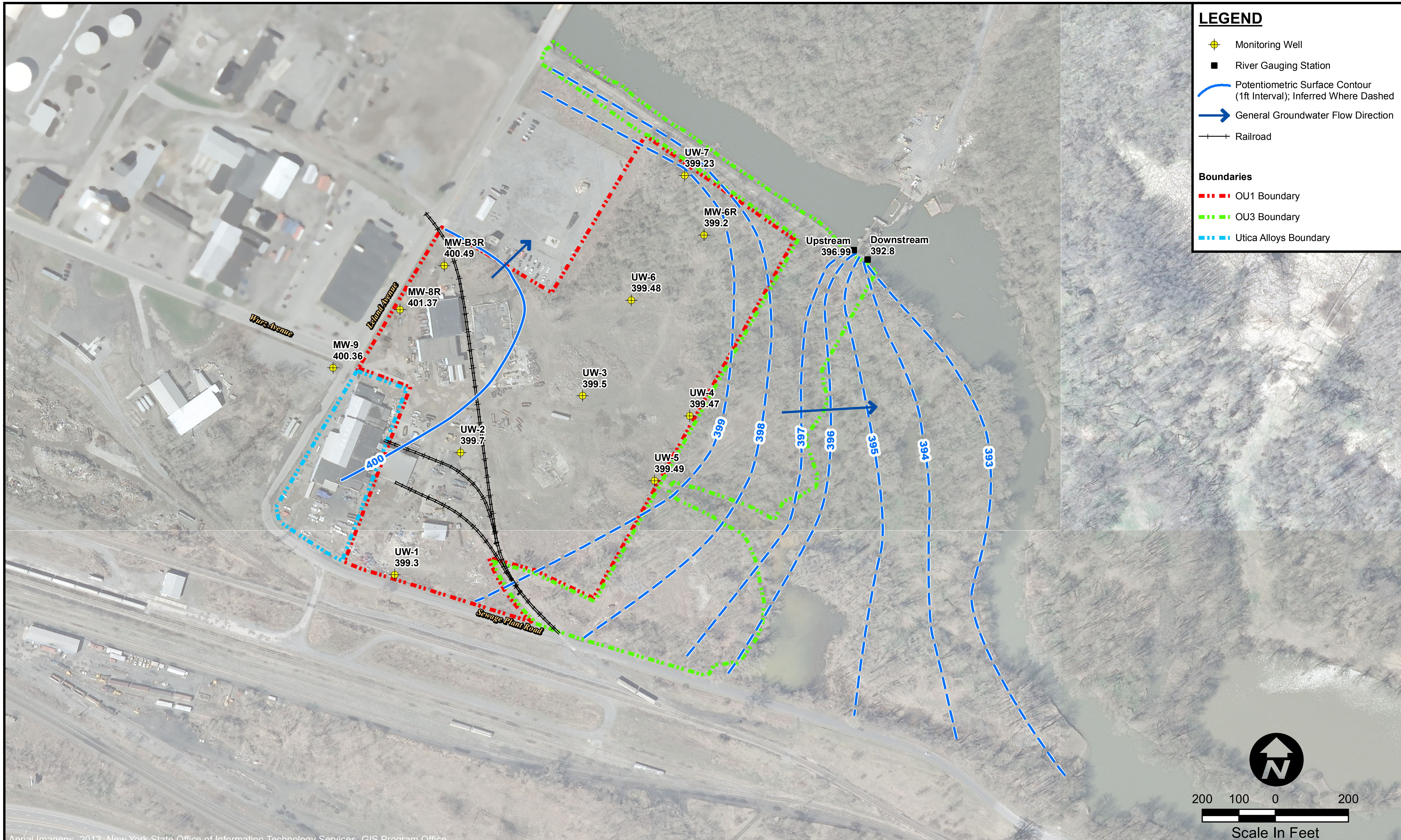
UNIVERSAL WASTE
UTICA, NEW YORK

N
0 100 200 300 400
Feet

FIGURE 3-2

SITE TOPOGRAPHY

Saved on 7/23/2014



D:\EHS_GIS\C00999_ELG\UniversalWaste\01_Analysis\20150913_PotSurface\PotSurface.mxd

Printed 5/25/2016 10:50:05 AM by ASmith

EHS Support *consider it done*	**UNIVERSAL WASTE UTICA, NEW YORK**	**POTENTIOMETRIC SURFACE CONTOURS OF THE FILL-ALLUVIUM WATER-BEARING ZONE OCTOBER 12, 2015**	**FIGURE 3-3**

EHS Support
consider it done

UNIVERSAL WASTE
UTICA, NEW YORK

TOTAL PCB CONCENTRATIONS IN BERM GRAB SAMPLE AND TRENCH COMPOSITE SAMPLE LOCATIONS

FIGURE 3-4

D:\EHS_GIS\C00999_ELG\UniversalWaste\01_Analysis\20160406_LOSRI_Figures\5-38_BermGrabSampTrComp_PCB.mxd

Printed 5/25/2016 12:13:39 AM by ASmith

APPENDIX A PHOTOGRAPHIC LOG

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
ELG Utica Alloys, Inc.	Universal Waste, Utica, NY	

Photo No. 1 **Date:**

Direction Photo Taken:

NA

Description:

Typical Debris Pile

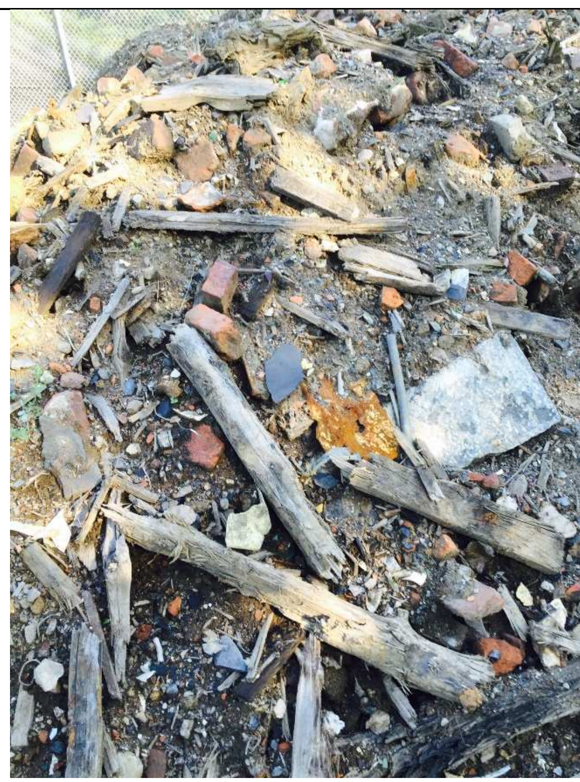
Photo No. 2 **Date:**

Direction Photo Taken:

NA

Description:

Mixed debris in piles



PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
ELG Utica Alloys, Inc.	Universal Waste, Utica, NY	

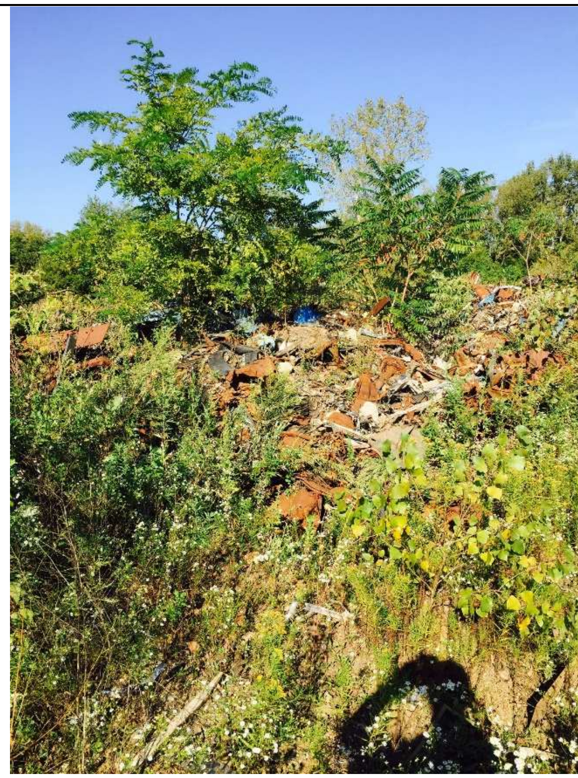
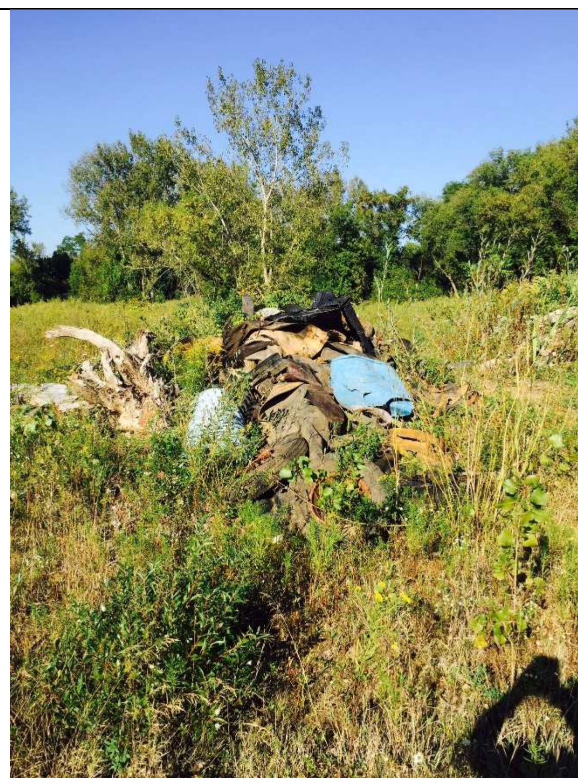
Photo No.	Date:	
3		
Direction Photo Taken: NA		
Description: Typical Debris Pile		

Photo No.	Date:	
4		
Direction Photo Taken: NA		
Description: Typical Debris Pile		

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
ELG Utica Alloys, Inc.	Universal Waste, Utica, NY	

Photo No.	Date:
5	

Direction Photo Taken:

NA

Description:

Berm

Photo No.	Date:
6	

Direction Photo Taken:

NA

Description:

Berm

APPENDIX B PILE COMPOSITE SAMPLING METHODOLOGY AND ASSOCIATED FIGURES

DEBRIS PILE COMPOSITE SAMPLING METHODOLOGY

UNIVERSAL WASTE SITE #633009
UTICA, NY

Introduction

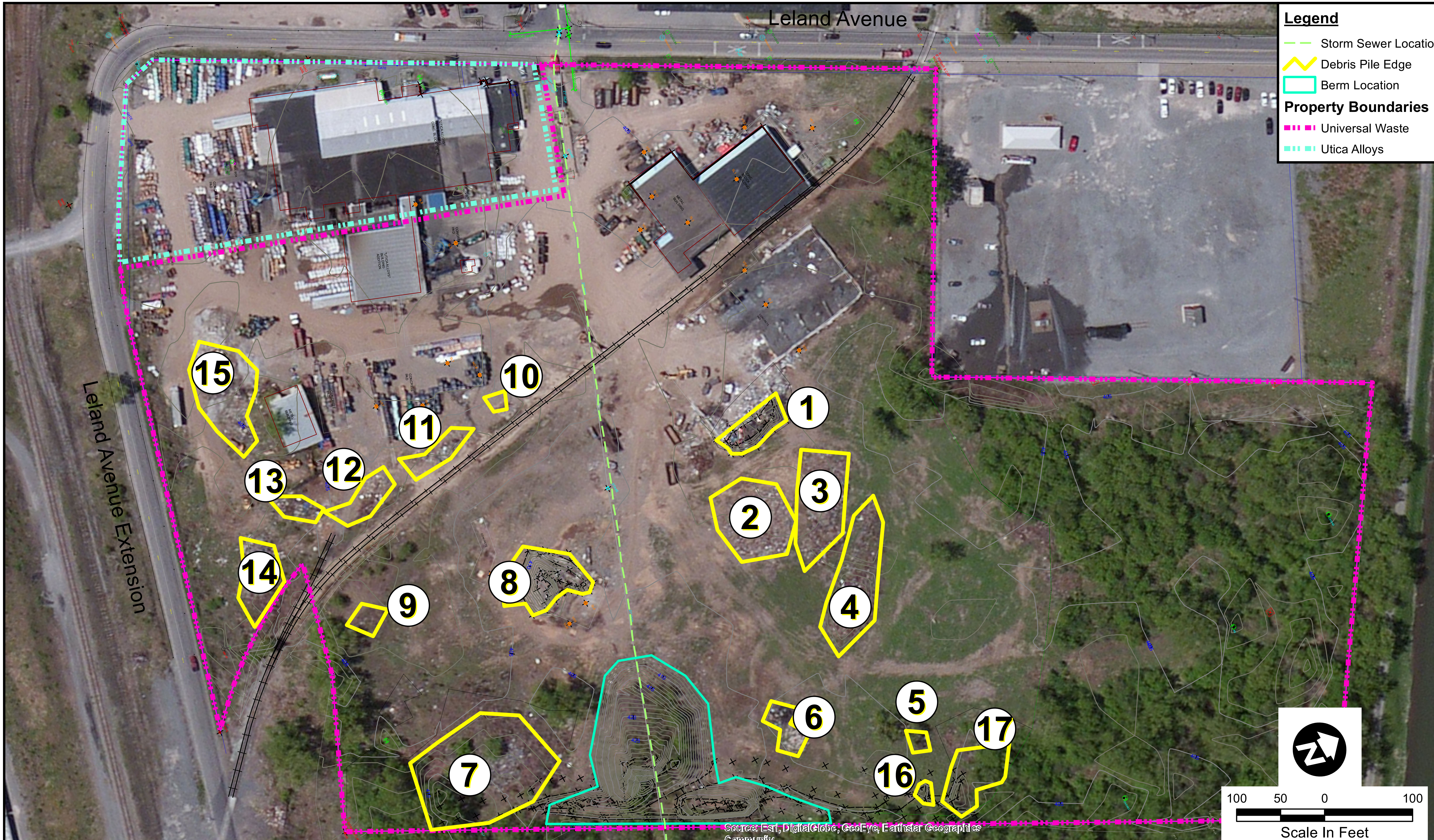
During June 2015, EHS Support personnel collected one screening composite sample from each of the 17 debris piles located at the Universal Waste site (the Site). The debris pile locations are shown on Figure 1. The screening composite samples were collected to determine if PCBs were a constituent of concern within the piles and if further characterization under TSCA was necessary. The samples were not collected for the purposes of characterizing the piles for disposal nor were they collected in accordance with NYSDEC's DER-10 or 40 CFR §761.61.

Sampling Methodology

Each pile screening composite sample comprised of eight (8) to 25 discrete grab samples depending upon the pile size/volume. The discrete grab samples were collected on two perpendicular transects across each pile (Figure 1). The transect locations were selected based on accessibility. The discrete grab samples were collected equidistantly along the transect. The distance between samples and the number of samples collected were based on the length of the transect and the availability of soil for collection. Table 1 below provides a summary of the number of discrete grab samples that comprised each pile composite sample.

Table 1 Debris Pile Composite Sample Summary

Pile ID	Estimated Pile Volume (cubic yards)	Number of Discrete Grab Samples included in Composite Sample
1	1,830	15
2	1,470	20
3	1,330	18
4	1,600	20
5	100	10
6	240	12
7	4,300	22
8	1,260	20
9	230	12
10	90	10
11	400	13
12	470	15
13	270	15
14	920	18
15	2,040	25
16	40	10
17	520	15



D:\EHS_GIS\C00999_ELG\UniversalWaste\01_Analysis\20151123_ReportFigures\Fig1-2_DebrisPileAndBermLocations.mxd

Printed 12/3/2015 9:58:28 AM by ASmith

EHS Support consider it done	UNIVERSAL WASTE UTICA, NEW YORK	DEBRIS PILE AND BERM LOCATIONS	FIGURE 1

D:\EHSS_GIS\C00999_ELGUniversalWaste\01_Analysis\20161026_DebSamp\Fig1_DebrisPileLocations.mxd

Printed 10/26/2016 5:20:44 PM by ASmith

EHS Support consider it done	UNIVERSAL WASTE UTICA, NEW YORK	**DEBRIS PILES 1, 2, 3, 4, 5, 6, 16, AND 17 COMPOSITE SAMPLE LOCATIONS**	**FIGURE 2**

EHS Support consider it done	UNIVERSAL WASTE UTICA, NEW YORK	DEBRIS PILES 7, 8, 9, 10, 11, 12, 13, 14, AND 15 COMPOSITE SAMPLE LOCATIONS	FIGURE 3

D:\EHS_GIS\C00999_ELG\UniversalWaste\01_Analysis\20161026_DebSampFig1_DebrisPileLocations.mxd

Printed 10/26/2016 5:20:52 PM by ASmith